Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
United Communications Corporation	)	
KEYC-TV (Fac. ID No. 68853)	)	CSR-8920-N
Mankato, Minnesota	)	Docket 16-54
	)	
Petition for Waiver of Sections 76.92(f) and 76.106(a) of the Commission's Rules	)	

To: Chief, Media Bureau

SUPPLEMENT TO PETITION FOR SPECIAL RELIEF
***of* UNITED COMMUNICATIONS CORPORATION**

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SUMMARY

United Communications Corporation is the licensee of KEYC-TV, the CBS affiliate in Mankato, Minnesota. Pending before the Commission is United's petition for a waiver of the significantly viewed exception to the network non-duplication and syndicated exclusivity rules. The matter involves four out-of-market television stations listed as significantly viewed in cable communities throughout KEYC-TV's market. Three of the stations are licensed to Minneapolis or St. Paul, Minnesota ("the Twin Cities Distant Stations"). The fourth – KAAL – is licensed to Austin, Minnesota.

Viewership statistics for the distant stations were generated by The Nielsen Company. The cases for which Nielsen statistics indicated a loss of significantly viewed status were set forth in the petition.

The Nielsen results as a whole, however, were perplexing.

The surveys registered viewership in communities outside of the possible transmission ranges of the Twin Cities Distant Stations. A station should not be credited with viewership – significant or otherwise – in a community if its signal is not viewable over-the-air in that community. In such event, Nielsen studies should reflect zero viewership.

With respect to KAAL, the Nielsen surveys did register zero viewership in the subject communities, consistent with the empirical reality that KAAL's signal is not viewable there. However, with respect to the Twin Cities Distant Stations, the Nielsen surveys reported exactly the opposite. The surveys indicated viewership in all communities notwithstanding the impossibility that the signals of the Distant Stations were viewable directly off air at those locations.

The incongruence between the Nielsen results for the Twin Cities Distant Stations and the Nielsen result for KAAL is striking. At first blush, there would seem to be no reason for it. There is no material difference in the terrain or other environmental characteristics of the Twin Cities Distant Stations' propagation paths as compared with KAAL, and the facilities have virtually identical technical reach.

Anomalies in data often signal the influence of one or more unseen variables. Such is the case here. In reality, the Nielsen households were *not* viewing the signals of the Twin Cities Distant Stations directly. They were viewing *translators* instead.

The translators are part of a large network operated by Cooperative Television of Southern Minnesota ("CTV"). The signals of the Twin Cities Distant Stations are first conveyed 97 miles to the CTV headend by fiber, and then radiated by the CTV translators throughout KEYC-TV's protected area and beyond. CTV's program guide and hardware do not differentiate the translator channels from the channels of the Distant Stations; and Nielsen diaries do not differentiate viewing of translators from

viewing of full-power stations. Thus, where the Nielsen studies registered viewership of the Twin Cities Distant Stations at implausible distances, this was the product of translator viewing.

The CTV architecture creates, as statisticians say, a confounding background. It forecloses the possibility of obtaining evidence of the type the Waiver Procedure is designed to reveal by the method the Waiver Procedure prescribes – *i.e.*, audience surveys. The Waiver Procedure as operationalized through Nielsen studies ordinarily yields this evidence straightforwardly. If a station's signal is not viewable in a community, Nielsen statistics evince this in the form of zero viewership – as did the Nielsen studies for KAAL. With respect to the Twin Cities Distant Stations, however, the emergence of that evidence is prescinded by the CTV architecture. It is impossible to determine the viewability *vel non* of the distant stations because the survey data were based on translator viewing. Executing the Waiver Procedure requires working around this obstacle.

In the Commission's technical rules, the key determinant of viewability is signal strength. A Nielsen statistic indicating that a distant station is not viewable manifests because the strength of the signal, for whatever reason, is not sufficient for 'television service'. In this case, where any inference of signal strength from the survey data is precluded, the viewability of the Distant Stations must be ascertained by considering signal strength evidence directly.

Fortunately, the Commission's signal propagation models are highly reliable predictors of signal strength. One such model is the computational engine of the FCC's DTV Reception Tool. Utilizing this tool we generate the predicted signal strength of each distant station at each of the subject communities. The accuracy of these results is confirmed by the Commission's *2016 Report to Congress* in MB Docket No. 15-43.

The viewability data establish that in 84 of 89 cases, the signals of the distant stations are not viewable in the subject communities, and thus cannot be considered significantly viewed there.

We also show that the confluence of conditions giving rise to this case is virtually unique industry-wide. The grant of the requested relief may properly be limited to this unique fact pattern.

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SUPPLEMENT TO PETITION FOR SPECIAL RELIEF

United Communications Corporation ('United') is the licensee of KEYC-TV, Mankato, Minnesota. Mankato ranks as Nielsen Market 199 – out of 210 Designated Market Areas nationwide. On February 4, 2016, United filed its Petition for Special Relief seeking a waiver of the Significantly Viewed Exception[1] to the network non-duplication and syndicated exclusivity Rules.[2] United is filing this Supplement in order clarify certain matters raised by the Petition and in order to facilitate the work of the Commission in granted the requested relief.[3]

[1] Two FCC Rules constitute the Significantly Viewed Exception. **47 C.F.R. §76.92(f)** provides: "A community unit [a cable operator or cable system] is not required to delete the duplicating network programming of any television broadcast station which is significantly viewed in the cable television community pursuant to **§76.54**." **47 C.F.R. §76.106(a)** provides that "a broadcast signal is not required to be deleted from a cable community unit when that cable community unit falls, in whole or in part, within that signal's [noise-limited] contour, or when the signal is significantly viewed pursuant to **§76.54** in the cable community." The grounds for waiving these Rules also apply to a waiver of **47 C.F.R. §§122(j)** and **123(k)** relating to carriage on satellite systems serving subscribers in KEYC-TV's DMA; *see also* 47 U.S.C. §§340(a)(2) and 340(c).

[2] *See* **47 C.F.R. §§76.92(a)** (cable network non-duplication) and **76.101** (cable syndicated program exclusivity); and **47 C.F.R. §§76.122(a)** (satellite network non-duplication) and **76.123(a)** (satellite syndicated program exclusivity). We sometimes refer to these as the Program Exclusivity Rules.

[3] *See WKBC Cablevision, Inc*., 54 FCC 2d 442 (1975) ("We have reserved in Section 76.7 of our rules the right to grant special relief where appropriate without imposing time restrictions on when a petitioner can file such a petition"); **47 C.F.R §76.7(a)** (the Commission may waive any provision of Part 76).

The issue concerns out-of-market television stations (the "Distant Stations")[4] whose programming is carried by cable operators in communities throughout the geographic area in which KEYC-TV has program exclusivity protection (the 'Subject Communities' or the '24 Communities').[5] The geographic area includes Blue Earth County, Watonwan County, Brown County and a portion of southern Nicollet County.[6]

Because the Distant Stations are classified as significantly viewed in the 24 Communities, KEYC-TV is chronically barred from enforcing its exclusivity rights. The Petition for Special Relief requests a waiver of the Significantly Viewed Exception so that KEYC-TV can receive the same protection against duplicative imported out of market signals that the Distant Stations enjoy in their own markets.

PROCEDURAL CONTEXT

A. *The Petition for Special Relief.* If a television station is classified as significantly viewed with respect to a given community, two propositions about empirical reality are considered true: (1) The over-the-air signal of the station is viewable in that community, and (2) viewership of the station's programming in the community is 'significant' according to the applicable criteria.[7]

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[4] Three of the Distant Stations are in the Minneapolis-St. Paul DMA: WCCO-TV, WFTC, and KMSP-TV. Depending on the context we will also refer to these as the 'Twin Cities Distant Stations'). The fourth station, KAAL, is in the Austin/Albert Lea/Rochester, Minnesota – Mason City, Iowa DMA ('Austin DMA').

[5] Because KEYC-TV is a 'smaller television market' facility, its protected zone to enforce network program exclusivity has a radius of **55 miles from the station's reference point coordinates**. **47 C.F.R. § 76.92**, Note; *see* **47 C.F.R. § 76.5(h)** (defining 'smaller television market' as the specified zone of a commercial television station licensed to a community that is not listed in **47 C.F.R. § 76.51** (the list of the top 100 television markets). KEYC-TV's protected zone for syndicated programs has a radius of **35 miles**. The 55 and 35 mile zones, as well as all other mileage zones used in applying the exclusivity rules, are measured from the station's "reference point" coordinates. Reference points are found at **47 C.F.R. § 76.53**.

[6] The Mankato Designated Market Area comprises Blue Earth County, Watonwan County, Brown County, Martin County and the southern tip of Nicollet County. Nielsen generally assigns each county to only one market based on the market whose stations receive the preponderance of audience in that county. In a few cases where a county is large and viewing patterns differ significantly within the county, a portion of the county will be assigned to one television market and another portion of the county to another market. This bifurcation occurred in the instant case. The southeastern tip of Nicollet County – essentially the community of North Mankato but also part of the City of Mankato – is assigned to the Mankato DMA and the rest of the county is assigned to the Minneapolis-St. Paul DMA.

[7] *See Cable Television Report and Order*, 36 FCC 2d 143, ¶84 (1972).

The Commission has held for many years that the signals of television stations on the Significantly Viewed List are viewable over-the-air in the counties and communities the List specifies. "We do not believe there is any serious dispute that, with very few exceptions, the signals in question are available over-the-air to individuals with rooftop antennas."[8] Because the viewability of a distant station ordinarily is not an issue, petitions for waiver of the Significantly Viewed Exception usually address only the 'viewership' element in the significantly viewed standard. A petitioner must demonstrate, based on over-the-air viewing data, that the subject station failed to sustain the prescribed viewing thresholds for two consecutive years.[9]

United's Petition for Special Relief was framed accordingly. Viewership statistics for the Distant Stations were generated by The Nielsen Company based on recent surveys of television households in the 24 Communities. The cases for which Nielsen statistics indicated a loss of significantly viewed status are set forth in the Petition for Special Relief and in **Tables 8 – 11** herein.

The Nielsen results as a whole were perplexing. A Nielsen study indicating that a station garners *viewership* in a particular community – whether or not the viewing level is 'significant' – necessarily entails that the station's signal is *viewable* there. With respect to the Twin Cities Distant Stations, the Nielsen surveys registered viewership in communities much too far from the stations' transmitters for reception of those signals actually to have occurred. For example, in Springfield, Minnesota – 108 miles from WCCO-TV's transmitter site – WCCO-TV registered share and cume numbers of 27.19 and 82.63, respectively. WFTC, the same distance from Springfield, registered share and cume numbers of 4.78 and 34.73; and KMSP-TV (also 108 miles away) registered numbers of 8.94 and 67.37. In Lewisville, Minnesota – 101 miles away – WCCO-TV registered share and cume numbers of 11.15 and 100.0, respectively; WFTC – 5.93 and 50.0; and KMSP-TV – 14.95 and 100.0.

Nor were these isolated cases. In nearly all communities in which usable ('intab') diaries were returned, the Twin Cities Distant Stations registered at least *some* viewership. In 96 percent of those cases, the distance between a station's transmitter site and a subject community exceeds the radio horizon.[10] More than half of the 24 Communities are greater than 90 miles from the Distant Stations'

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[8] *Network Program Exclusivity Protection by Cable Television Systems (Reconsideration)*, 68 FCC 2d 1461, ¶20 (1978); *see also Desert Empire Television Corp.*, 86 FCC 2d 644, ¶10 (1981).

[9] *See* **47 C.F.R. §76.54(b)** and **47 C.F.R. §76.5(i).**

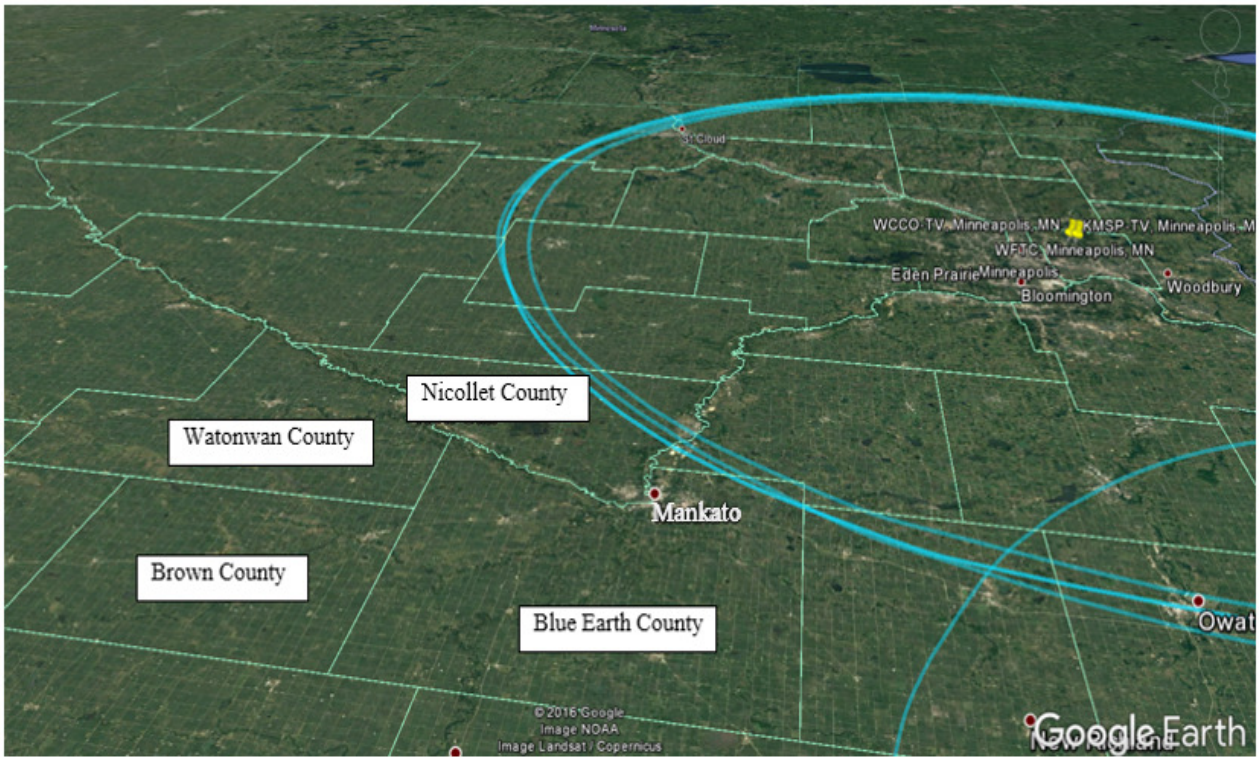
[10] The radio horizons of the Distant Stations are: WCCO-TV, 68.3 miles; WFTC, 66.2 miles; KMSP-TV, 68.4 miles; and KAAL, 69.6 miles. *See* **Exhibit 1**, *infra*.

transmitter locations and 86 percent of the communities are more than 75 miles away. Ninety-four percent of the communities lie beyond the noise-limited contours of the Distant Stations – most of them by 20 or more miles.

Of course, the propagation of digital television signals can vary and particular cases can depart from standard patterns of technical range where terrain obstructions interfere with signal propagation. Here, however, the *patterns themselves* are anomalous. If the Nielsen data were taken at face value, it would mean that the signals of the Twin Cities Distant Stations as a rule are viewable over-the-air at impossibly great distances. The extent of this anomaly can be appreciated by considering *Figure 1*.

Figure 1

Noise-limited Contours of the Distant Stations
In Relation to the Geographic Area of the Subject Communities



This Google Earth map was generated by the Commission's **TV Query Tool**.[11] The blue curves are the noise-limited contours of the four Distant Stations. (In this case, the radio horizon of each Distant

[11] The TV Query Tool is found at **https://www.fcc.gov/media/television/tv-query**. When a television call sign is entered, TV Query returns a record that includes a section designated 'Maps.' One of the map options is 'KML file.' This link generates a Google Earth map showing the station's noise-limited contour. In Figure 1, the contours of the four Distant Stations (three to the northeast, in the Minneapolis-St. Paul DMA; one to the southeast in the Austin DMA) were created by iterating the procedure for each station.

Station is approximately coincident with that station's noise-limited contour.) The 24 Communities are in Blue Earth County, Watonwan County, Brown County and the southeastern tip of Nicollet County.

While it is possible that direct viewership of the Twin Cities Distant Stations might register in Nielsen diaries for households in communities close to the edge of the stations' contours, any direct viewing is most unlikely for households in the far-flung westerly communities of Blue Earth, Watonwan, and Brown Counties. The Nielsen results thus appear to be anomalous.

In contrast to the Nielsen studies for the Twin Cities Distant Stations are the Nielsen studies for KAAL (in the Austin market to the southeast). The distances between the KAAL transmitter site and the 24 Communities are likewise wholly at odds with the proposition that KAAL is actually viewable over-the-air in those communities. More than half of the communities are greater than 95 miles from KAAL's transmitter and roughly 80 percent are more than 80 miles away. With respect to KAAL, however, the Nielsen studies yielded results *confirming* that KAAL's signal is not viewable. Specifically, in all instances in which diaries were returned, the studies indicated zero cume and zero share – just the results one would expect given that KAAL's signal does not reach the Subject Communities.

In the two categories of cases – the Twin Cities Distant Stations on one hand and KAAL on the other – the propagation distances between the stations' transmitter sites and the Subject Communities are intuitively implausible. With respect to KAAL, the Nielsen results confirmed this. With respect to the Twin Cities Distant Stations, they indicated viewership in the Subject Communities when this is a virtual impossibility.

There is no obvious reason for these incongruent results. What accounts for the difference?

Anomalies in data often signal the presence of exogenous variables inadvertently masked in the set-up of the measurement. Such is the case here. With respect to the Twin Cities Distant Stations, the Nielsen statistics were *not* derived from local households' reception of over-the-air signals of the Distant Stations, as required. Rather, they were derived from the reception of translator signals. The translators[12] are part of a network operated by Cooperative Television of Southern Minnesota ("CTV").

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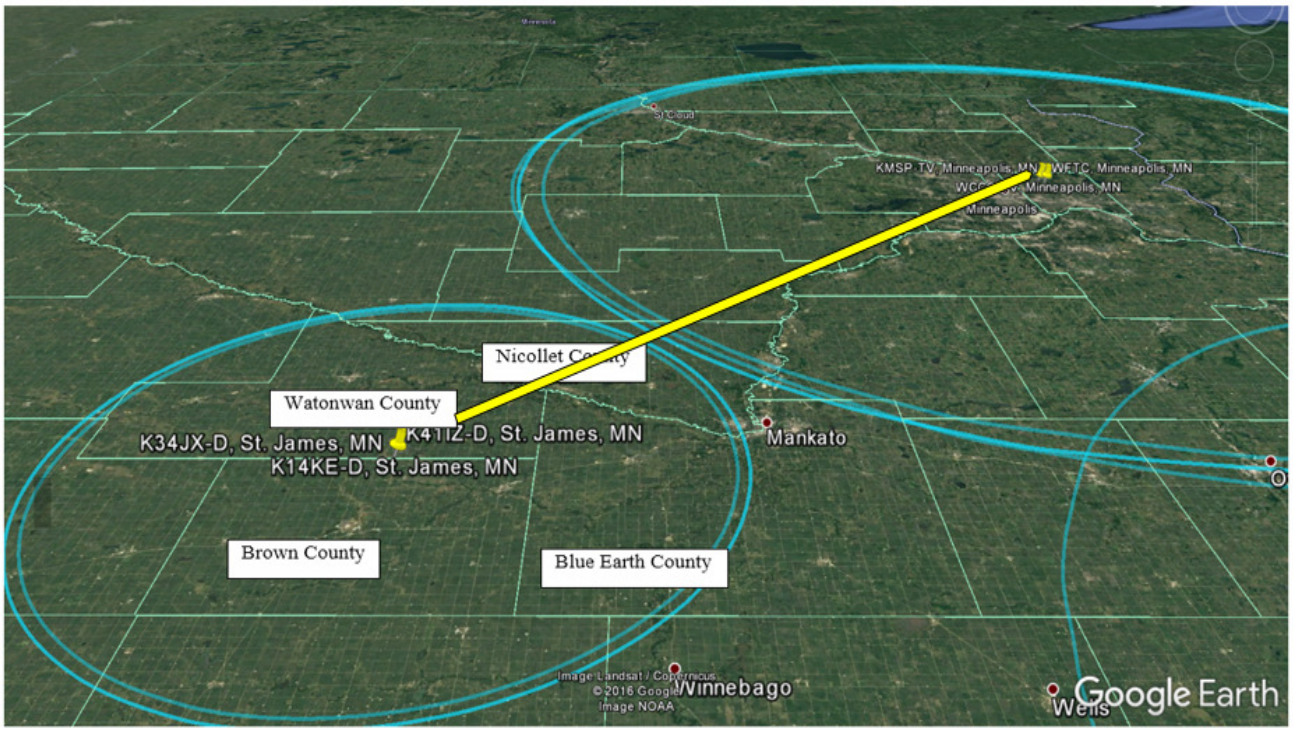
[12] Technically, the CTV stations are licensed as "low power television stations." However, to Petitioner's knowledge the CTV stations at issue here operate in exactly the same fashion as translators, broadcasting nothing but the retransmitted signals of full service television stations. CTV does have a station that broadcasts a character-generated list of the parent stations / programming feeds available on the other CTV channels, but here we focus solely on the CTV stations that repeat the signals of certain full power television stations licensed to Minneapolis, and originate no programming as such. Because the subject CTV stations are the precise functional equivalents of translators, we refer to them herein as such rather than using the overly long, clumsy (and in this case misleading) term "low power television stations."

The signals of the three Distant Stations licensed to Minneapolis or St. Paul are delivered from the Twin Cities to the CTV headend (97 miles away) by fiber optic lines.

Figure 2 depicts this arrangement:

Figure 2

Delivery of Twin Cities Signals via Optical Fiber to CTV's St. James Tower;
CTV Translators Re-transmitting the Twin Cities Distant Stations



The nodes of the CTV system are translator towers at Godahl (St. James), Frost and Jackson, Minnesota.[13] CTV explains on its website that the signals of the Twin Cities Distant Stations are "brought by fiber optic cable to all three towers from the Twin Cities."[14] According to CTV, this ensures that "no signal degradation" of the distant signals occurs and that when the signals are re-transmitted from the CTV towers throughout KEYC's market area they are "of the same quality as broadcasted in the Twin Cities."[15]

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[13] *See* Figure 6, *infra.*

[14] *See* http://ctv.coop/index.php?page=8.

[15] *Ibid.* Hereafter we will refer to the configuration comprising the fiber optic connection and the CTV translator network as the 'CTV Architecture'.

The principal node of CTV's network is situated at the heart of KEYC-TV's service area, within just a few miles of KEYC-TV's own transmitting antenna, near St. James and Godahl, Minnesota. At this location, CTV receives the signals of the Twin Cities Distant Stations over optical fiber, and then broadcasts them via digital translators throughout a 45-mile radius encompassing the 24 Communities and much of KEYC-TV's protected zone. Additional translators repeating the signals of the Distant Stations at the Frost and Jackson nodes achieve further penetration of KEYC-TV's protected zone, duplicating most of KEYC-TV's over-the-air coverage to the west and south of Mankato.[16]

In all or almost all of the 24 Communities, the signals of the Twin Cities Distant Stations are not viewable over-the-air.[17] Antenna households in this region of rural Minnesota can only 'receive' the stations to the extent they receive them as a function of cable television penetration, direct-to-home satellite television, or translators via the CTV system.[18] The Nielsen households were a subset of the last group. Households responding to the Nielsen surveys were translator audiences.[19]

The influence of the CTV Architecture explains the anomalous Nielsen statistics. The Nielsen studies could register viewership of the Twin Cities Distant Stations at implausible distances because the surveys were the product of translator viewing.

For a petitioner to obtain a waiver of the Significantly Viewed Exception it must be demonstrated that a subject station is no longer significantly viewed "following the methodology set forth in Section 76.54(b)." The reference class specified in Section 76.54(b) is "over-the-air television homes" – homes that receive television service by use of antennas that capture the radiated signals of the target stations. The Waiver Procedure is trusted to produce relevant evidence because the prescribed methodology is

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[16] The translators and primary stations are shown in **Table 12**. *See* **Section II(D)**, *infra,* for a detailed description of the CTV Architecture.

[17] Possible exceptions are analyzed in **Section III(a)** and **Table 17**.

[18] "Digital TV translator stations provide a means whereby the signals of DTV broadcast stations may be retransmitted to areas in which direct reception of such DTV stations is unsatisfactory due to distance or intervening terrain barriers." **47 C.F.R. §74.790(a)**.

[19] For the purpose of significantly viewed analyses, the viewability of a distant station's signal refers to the station's natural over-the-air signal. If the natural reach of the signal is augmented by a translator located outside the station's market area, viewership of the station's programming attributable to translator audience is not considered. This is the law whether the translator is owned by the primary station itself or a different party, as in the case of CTV's ownership of the translator network here. *See* **Section II(D)(5)(a)**, *infra,* for a fuller analysis of this issue.

rationally designed to achieve the Waiver Procedure's purpose – that is, to ascertain "the over-the-air realities of [the] situation."[20]

In the case of the Twin Cities Distant Stations, however, the CTV Architecture prescinds this evidence-generating dynamic. Signals of the translators are received 'over-the-air' – but this is wholly *independent* of the technical reach of the distant stations. There is no causal relation between the technical reach of the distant signals and the reception of those signals by 'over-the-air television homes.' Exactly the same Nielsen statistics would manifest if the Twin Cities Distant Stations went off the air altogether, and merely transmitted their programming via fiber to the CTV headend.

The problem is not the Commission's Waiver Procedure or the Waiver Procedure as it is operationalized by the Nielsen methodology. The problem is that the CTV Architecture forecloses the possibility of obtaining evidence of the viewability of the Twin Cities Distant Stations by means of audience surveys. Nielsen studies ordinarily yield this evidence straightforwardly: If a station's signal is not viewable in a community, the station cannot be 'viewed' in that community – 'significantly' or otherwise. In such a case the Nielsen statistics should indicate that the station garners no viewership (zero share and zero cume) – as the Nielsen studies showed with respect to KAAL.

In the case of the Twin Cities Distant Stations the viewability inference ordinarily available in a Nielsen statistic is precluded. The context of the analysis – the CTV Architecture – took it out of play.[21]

In the Commission's technical rules and in its jurisprudence, the key determinant of viewability is signal strength.[22] A Nielsen statistic indicating that a distant station is not viewable materializes because the strength of the station's signal, for whatever reason, is not sufficient for 'television service'. In the present case the confounding influence of the CTV Architecture precludes the possibility of generating such evidence in the standard way. To assess the viewability of the Distant Stations requires that their signal strengths be examined directly. That is the primary purpose of Supplement.

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[20] *Network Program Exclusivity Protection by Cable Television Systems*, 68 FCC 2d 1461, ¶19 (1978).

[21] Of course, the very existence of the CTV network is indirect evidence on this score. Translators "provide a means whereby the signals of DTV broadcast stations may be retransmitted to areas in which direct reception of such DTV stations is unsatisfactory due to distance or intervening terrain barriers." **47 C.F.R. §74.790(a)**. Moreover, the sheer size of the CTV translator network (**40 translators**) and its enablement by a 97-mile fiber connection from the Twin Cities, strongly reinforce our explanation for the anomalous Nielsen statistics.

[22] *See* **47 C.F.R. §73.683** *et seq*.

B. *Waiver of the Significantly Viewed Exception*. The procedures for obtaining a waiver of the Significantly Viewed Exception derive from *KCST, Inc. v FCC*.[23] In that case, the United States Court of Appeals for the District of Columbia Circuit explained that the key focus in significant viewing waiver evaluations should be the status of "the underlying premise" of the rule. If the state of affairs presupposed by the rule has lapsed or is otherwise not extant, the rule "has no logical application" and "there is no apparent rationale for not granting a waiver."[24] This includes cases in which a signal is not viewable. "For example, if a station's viewership in a county falls to nearly zero because of changes in its signal, . . . it is obviously illogical for the Commission to deem the station significantly viewed."[25]

On remand from the Court of Appeals, the Commission established the procedure by which a petitioner might present viewing data demonstrating that the underlying premise of the Significantly Viewed Exception is not extant – *i.e*., that the distant station is not in fact significantly viewed in the community in question.[26]

The showing has two elements. The first element limits the reference class to "over-the-air television homes" – households whose television viewing occurs by use of an antenna that captures the propagating signal of the distant station. This constraint anchors the waiver procedure to one of the empirical presuppositions of the Significantly Viewed Exception – namely, that the signal of the distant station is sufficiently strong to be acquired by television receive antennas in the cable community under consideration.

The second element concerns the level of viewership the viewable signal attracts in the cable community. Whether or not that level is 'significant' depends on its evaluation under **47 C.F.R. §76.5(i)**. This constraint anchors the waiver procedure to the other empirical presupposition of the Significantly Viewed Exception – namely, viewing of the distant station's programming is 'significant.'

If either of the empirical premises underlying the Significantly Viewed Exception is missing, it cannot be sustained. If the signal of the distant station is not actually viewable over-the-air in the cable community, the station cannot hold significantly viewed status. Alternatively, if a signal is viewable in

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[23] 699 F.2d 1185 (D.C. Cir. 1983).

[24] *Ibid*.

[25] *Ibid*.

[26] *KCST-TV, Inc*., 103 FCC 2d 407, 413 (1986).

the cable community, but the signal is not 'significantly' viewed there, the station cannot hold significantly viewed status.

These inferences are illustrated in the following table:

Signal is Viewable	Viewership is Significant	→	Station is Significantly Viewed
True	True	→	True
False	'True'	→	False
True	False	→	False

?

The red arrow points to the anomaly manifested in the present case. It cannot at once be 'false' that the signal of a distant station is *viewable* in a given community, and yet 'true' that the station is *significantly viewed* in the community. Here, the Nielsen data appear to have been produced from such an impossible construct. As we have explained, this is only because the surveys reported translator viewership as if it were viewership of the Distant Stations.

In most waiver analyses the issue of the viewability of a distant signal is not separately articulated because it is not in dispute. But in a case where the distant signal is *not* actually viewable, the Waiver Procedure as operationalized through Nielsen's methodology should reveal this. If a station's signal is *not* viewable in a community, the station cannot be 'viewed' in that community – 'significantly' or otherwise. In that case the Nielsen statistics should indicate that the station garners no viewership (zero share and zero cume).[27]

That result did not emerge here with respect to the Twin Cities Distant Stations because of the confluence of variables discussed above. Those variables disrupted the standard inference that, if a station's signal is not viewable in a community, the station cannot have viewership there. It is therefore necessary to assess the viewability of the stations by explicitly scrutinizing the strength of their signals.

I. REGULATORY FRAMEWORK

The Program Exclusivity Rules empower local television stations to require that cable operators delete from their systems duplicate network and syndicated programming imported from out-of-market

[27] A zero viewership result also could manifest where a station is viewable in the community, but nobody watches it. For present purposes, that scenario is not relevant. The crucial point is that, *if it were the case* that a distant signal was not viewable, Nielsen studies should reveal this in the form of statistics indicating zero viewership over two consecutive years.

stations.[28] There are certain cases in which the operation of the exclusivity Rules is precluded. The Significantly Viewed Exception is one of them. A cable operator is not required to delete duplicated network or syndicated programs of a distant station which has been classified as 'significantly viewed' in the cable community.[29]

A distant station's having significantly viewed status substantially alters the rights and obligations that underpin a local broadcaster's stewardship responsibilities. The Localism model entails a tightly configured state of affairs: Aberrations to its natural dynamics threaten its proper functioning.[30] This threat is magnified when the distant station is a major television market broadcaster and the local station is a smaller television market broadcaster, as in the present case:[31]

For this reason, the immunity afforded by the Significantly Viewed Exception is predicated on a strict empirical reality – namely, that the signal of a distant station is viewable over-the-air in the cable community and the station's viewership there is 'significant'. If that empirical reality is not extant – either because the distant signal is not viewable in the cable community or because the distant station's audience is not significant – then the Significantly Viewed Exception does not apply.

A. *Breaking down 'Significantly Viewed'*

A television station's signal (*qua* waveform) is not constrained by the formal boundaries of a market area. Consequently there are instances in which a distant station's signal is viewable over-the-air in a community outside the station's defined service area. When the signal of an out-of-market station is

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[28] *See also Implementation of the Cable Television Consumer Protection and Competition Act of 1992*, 8 FCC Rcd 2965 (1993), *on recon*., 9 FCC Rcd 6723 at 6747, ¶ 114 ("Network non-duplication and syndicated exclusivity rights protect the exclusivity that broadcasters have acquired from their program suppliers, including their network partners, . . . [This policy] promote[s] the continued availability of the over-the-air television system, a substantial government interest in Congress' view").

[29] Broadcasters and cable operators are not in privity with respect to network and syndicated programming contracts. This complicates the broadcaster's ability to enforce its exclusivity rights in civil courts. The Commission's network non-duplication and syndicated exclusivity rules are an extra-contractual mechanism to achieve the right public interest result more efficiently.

[30] *See, e.g*., *Retransmission Consent*, MB Docket No. 10-71 (NAB analysis finding that when a local broadcast station regains program exclusivity by overcoming an out-of-market station's significantly viewed status, its ratings increase by a statistically and economically significant amount).

[31] *See, e.g., Network Program Exclusivity Protection by Cable Television Systems*, 62 FCC 2d 99 (1976) at ¶7. "Basic to any issue in the network non-duplication area is the danger of adverse impact on the ability of television stations to perform their public service obligations. Moreover, when there is a risk of injury of broadcast service to the public, it is appropriate to consider and balance that risk against the value of whatever additional service cable subscribers may be receiving."

viewable in a particular community and the viewership there is 'significant', the station is a candidate for significantly viewed status.[32]

In order for a station's signal to be considered "significantly viewed" two elements are required: 'viewability' and 'viewership.' The 'viewability' of a distant signal is a matter of physics and engineering. It is a technical issue. 'Viewership' relates to the size of the audience that a distant station realizes in a community over the air – provided that its signal is viewable there in the first instance. A distant station's status as 'significantly viewed' thus denotes that the station's signal is both viewable in the community *and* that the station's viewership there is 'significant'.

1. Viewability

Viewability is defined as a household's ability to receive a station's over-the-air signal. This reception occurs, broadly speaking, when the signal at that location is of a particular minimum strength. Thus a signal is 'viewable' when the signal level at the input terminal of the receiver is sufficiently strong for 'television service,' as defined by the FCC.

Of course, interrelated variables affect signal strength. For 'television service' to occur in a given case, those variables must operate as a whole to deliver the needed signal strength to the viewer's television set. But, like all phenomena explained by physics, the dynamics affecting signal strength range within certain unforgiving limits.[33]

An upshot of these limitations of signal propagation and reception is that the conditions under which a signal will be viewable are specifiable. They can be modeled in computer programs and standardized in regulations. The Commission's Technical Rules define the conditions under which 'television service' can reliably be predicted to occur.[34]

Predicting Viewability. Viewability can accurately be predicted through the use of computer models. 'Longley-Rice' refers to a family of computer models that the FCC, other government agencies

[32] The regulatory implications of significantly viewed status have been understood in various ways since the FCC created the significantly viewed concept in 1971. But the concept always and only has been invoked when the over-the-air signal of a distant station is viewable in a subject community.

[33] Signal-to-noise ratio is the fundamental limit to the range of radio or television communication, as it is for any mode of communication including a conversation in a noisy restaurant. The service areas of television stations are defined on the basis of this concept, termed "noise-limited" service in the Commission's Rules.

[34] *See* **Section II(B)**, *infra*.

and the broadcast industry have used for many years. Their accuracy has proven to be exceptional.[35] The Commission's DTV Reception Tool utilizes one of the versions of the Longley-Rice model adopted by the FCC for digital television.[36]

2. 'Significant' Viewership

Viewership is a function of the viewing behavior of television audiences. In order to ascertain which viewable signals are actually viewed, patterns of viewing are determined by surveys. The surveys are translated into two categories of statistical profiles. Viewing 'share' is a percentage of total viewing hours of a station in the community. Net weekly circulation ('cume') is the percentage of television households that view a station five minutes or more per week.[37]

3. Measuring Viewability and Viewership

As explained earlier, a Nielsen finding that a station's viewership in a community is 'significant' necessarily implies that the station's signal is viewable in that community. Although the elements of the Commission's Waiver Procedure inherently include both viewability and viewership, this distinction is not separately articulated in most waiver analyses because the actual viewability of the distant signal is not in dispute.

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[35] *See, e.g.*, *Report to Congress, The Satellite Home Viewer Extension and Reauthorization Act of 2004, Study of Digital Field Strength Standards and Testing procedures*, ET Docket No. 05–182, released December 9, 2005, ¶ 37 ("*2005 Report to Congress*") ("The NAB continues that the ILLR model should be used in the long term (after the digital transition) because it does exceptionally well at predicting whether or not particular locations will receive a signal above the DTV minimums. It states that the model provides correct predictions 95% of the time and that when errors do occur they are evenly divided between over and under predictions. [The engineering firm of Meintel, Sgrignoli, and Wallace] draws a similar conclusion for use of the ILLR model with respect to DTV. It studied real world empirical data from thousands of measurements in 12 different U.S. cities and submits that the data shows that the Longley-Rice model correctly predicted 94.4% of the time when the signal would be above the DTV minimum").

[36] *See Establishment of a Model for Predicting Digital Broadcast Television Field Strength Received at Individual Locations*, Report and Order and Further Notice of Proposed Rulemaking, ET Docket No. 10-152 (FCC 10-194), released November 23, 2010, ¶10 ("[W]e are adopting a new digital [Individual Location Longley-Rice] model . . . for presumptively determining the ability of individual locations to receive with an antenna the digital signals of full service television stations . . . . The new digital ILLR model incorporates parameters and features for prediction of the signal strengths of digital television signals").

[37] *See* 47 C.F.R. § 76.5(i) (required audience levels for significantly viewed status).

Nonetheless it is crucial to the integrity of significantly viewed decisions that both dimensions are accounted for. This has been the objective of the FCC from the advent of the significantly viewed concept. When the Commission established the criteria that would define 'significant' viewing it emphasized that the significantly viewed standard was intended to capture both viewability and viewership:

> The two criteria reflect distinct concepts. Net weekly circulation . . . tends largely to reflect *the availability or viewability of a signal as a technical matter*. Audience share indicates *the intensity of viewer interests*. The combination of these two criteria provides greater assurance that the signal meeting the test is in fact significantly viewed.[38]

Thus, if a Nielsen statistic indicates that a distant station is has substantial circulation in a community, it can ordinarily be inferred that the signal of the station is viewable over-the-air in that community. And if the signal of a distant station is *not* viewable in a particular community, Nielsen study ordinarily would yield data consistent with this state of affairs as well. Because the station could not have viewership in the community if its signal were not viewable there, its viewership would register as zero (zero 'cume' and zero 'share').

The Nielsen studies for KAAL reflect this principle. For example, the transmitter site of KAAL is 107.6 miles from St. James, Minnesota. The Commission's DTV Reception Tool and the Signal Analysis Tool both indicate that KAAL is not viewable in St. James. The Nielsen study confirms this:

Nielsen Study for Distant Station KAAL
With respect to St. James, MN (56081)

Zero viewership is also possible, of course, in circumstances in which a station's signal is viewable

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56081	Number of Intabs	5	3	4	7	8	11	19
	Average Weekly Cume	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cume Std. Error	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share Std. Error	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[38] *Cable Television Report and Order*, 36 FCC 2d 143, ¶84 (1972).

but residents of the subject community choose not to watch it.[39] The relevant point here is that where reception of a distant signal is not empirically plausible, the Nielsen study should reflect this fact in the form of zero viewership, as in the example above.

Nielsen studies thus provide evidence of viewership and evidence of viewability. The Commission's Waiver Procedure as operationalized in Nielsen studies is effectively designed to reveal "the over-the-air realities of [the] situation."[40] That reality might justify a station's continued immunity from the Program Exclusivity Rules by virtue of ongoing 'significant' viewership in a particular community; or it might justify the station's loss of that immunity because its viewership has dropped. Those are the alternatives pragmatically in play in most significant viewing cases. But the waiver methodology is also sufficiently nuanced to capture – in the form of viewership registering as zero – the unusual case in which a station's signal is not, or is no longer, viewable over-the-air. This scenario was explicitly envisaged by the Court of Appeals in *KCST, Inc*. "[I]f a station's viewership in a county falls to nearly zero because of changes in its signal, . . . it is obviously illogical for the Commission to deem the station significantly viewed."[41]

These considerations underscore that the viewability of a distant station's signal is always relevant.

(a) Measurement of Viewership. Viewership of a station is 'significant' when the viewing share is at least 3 percent for network stations or 2 percent for independent stations; and when net weekly circulation is at least 25 percent for network stations or 2 percent for independents. The reference class is "over-the-air television homes".[42] For a waiver of the Significantly Viewed Exception, a petitioner demonstrates that a distant station has failed to obtain a 3 percent share of total viewing hours and a net weekly circulation of 25 percent, by at least one standard error (or for an independent station, a 2 percent share of total viewing hours and a net weekly circulation of 5 percent, by at least one standard error).

Showings for this purpose must be based on television audience surveys conducted by a professional organization that is independent from the television station ordering the surveys. The Nielsen Company is the most prominent such firm. Four times a year, Nielsen measures television audiences nationwide

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[39] Indeed, it was in order to account for this possibility that the significantly viewed concept was originally created in 1972. Until that time carriage rights were based on a system of priorities that included relative distances and contours but without a requirement that a distant station viewable locally also have local viewership. *Ibid.*

[40] *Network Program Exclusivity Protection by Cable Television Systems*, 68 FCC 2d 1461, ¶19 (1978).

[41] *Ibid.*

[42] *See* **47 C.F.R. §76.54(b)** (Significant viewing . . . may be demonstrated by an independent professional audience survey of over-the-air television homes . . . .)

and publishes this information in its Viewers in Profile Reports. Nielsen's significantly viewed studies are generated from its database of general television audience surveys.

Nielsen households are broadly grouped according to the technology the households utilize for television viewing. These categories are: Cable Households, ADS Households and Non-cable/Non-ADS Households.[43] The Nielsen diaries do not differentiate viewership through reception of translator signals from viewership through reception of the signals of distant stations whose programming the translators are re-transmitting.[44]

The methodology for determining significantly viewed status has sometimes been criticized because it is not "a rigorous statistical analysis."[45] The Commission recently has explained, however, that

> the procedures for determining significantly viewed status are only intended to **estimate** over-the-air viewing levels . . . [T]hey do not require a sophisticated statistical analysis, but rather constitute a practical methodology, with reasonable statistical bounds . . . to grant waivers when significant viewing levels no longer demonstrate that a station is 'significantly viewed' over the air. While it is true that statisticians most frequently use a 95 percent confidence level (*i.e*., 2 standard errors) to . . . assess the reliability of a reported statistic, Section 76.54 of the Commission's rules sets forth a lower level of confidence – approximately 68 percent.[46]

(b) Measurement of Viewability. As noted, viewability is a function of signal strength at a television receiver expressed in dBm. The Commission's **DTV Reception Tool** utilized to generate the viewability data in *Tables 3 – 6* returns output data characterized in dBm.

* * *

In sum, the procedures for assessing viewership and viewability each are characterized by reliability levels that the Commission deems sufficient for agency action. In the case of determining viewership, the prescribed sampling technique has a confidence level of about 68 percent. In the case of presumptively determining viewability, the digital ILLR model has a predictive accuracy of about 95 percent.

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[43] Nielsen defines Alternative Delivery Source ("ADS") to include the following technologies: satellite (C-Band), DBS (Ku-Band), SMATV (master antenna), and MMDS (includes multi-channel multi-point and multi-point distribution service). Thus, noncable/non-ADS homes are those that do not subscribe to an MVPD, and view the broadcast signal in question over-the-air.

[44] *See* **Figures 11 and 12**, *infra.*

[45] *Gulf-Coast Broadcast Company and Journal Broadcast Corp,*, 26 FCC Rcd 15027, ¶16 (2011).

[46] *Ibid*. (emphasis added).

B. *The Significantly Viewed List*

The significantly viewed status of most television stations derives from audience surveys conducted in 1970-71 by American Research Bureau (later 'Arbitron') and incorporated by the Commission into its 1972 Significantly Viewed List.[47] Two particular aspects of the original significantly viewed study are pertinent in the instant case.

(1) The Arbitron surveys used in the original Significantly Viewed List included translator audiences in addition to viewership attributable to reception of a full-power station's over-the-air signal. Arbitron's surveys did not differentiate the two services.[48]

(2) The Arbitron studies on which the 1972 Significantly Viewed List was based included a presumption that if a television station were significantly viewed in one community in a county, it was significantly viewed in all communities in that county. The Commission acknowledged this as a limitation when the original list was adopted but accepted the county-wide data because of the motivating exigency of the period, which was to stimulate the evolution of cable. That policy objective "outweighed the benefits that would result from waiting for more accurate community by community data, which was not available at the time."[49]

In **Section II(B)(2)(c)** we explain the implications of these characteristics with respect to the significantly viewed status of the Distant Stations.

II. EVIDENCE REGARDING VIEWABILITY

A. *Status Quo Ante: The Distant Stations and the 24 Communities Per the Significantly Viewed List*

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[47] *See Community Antenna Television Systems (Reconsideration),* 36 FCC 2d 326, App. B (1972). Section 340(c)(2) of the Communications Act requires that the Commission's website host a **current list of all significantly viewed stations** (Significantly Viewed List or SV List). This consists of the 1972 SV List as amended over time *via* additions of stations since found to be significantly viewed, as well as annotations to the SV List that indicate stations no longer significantly viewed in specific communities as determined case by case. Stations with a plus sign (+) under individual counties are those stations added to the SV List after the Commission's original 1972 compilation. Stations with a pound sign (#) are subject to programming deletions in the communities indicated.

[48] In subsequent years, television licensees petitioning to be added to the Significantly Viewed List have sometimes predicated their statistical showings on data that includes translator audiences, urging its acceptance on the ground that viewership from translators had been part of the 1972 List. The Commission repeatedly has rejected this position. *See* **Section II(D)(5)(a).**

[49] *Scranton Broadcasters, Inc.*, 88 FCC 2d 1482, ¶ 12 (1982).

As explained earlier, three of the Distant Stations are in the Minneapolis-St. Paul DMA. These are: WCCO-TV, WFTC, and KMSP-TV. The fourth station, KAAL, is in the Austin DMA.

According to the Commission's Significantly Viewed List, the Distant Stations are significantly viewed in four counties of the Mankato DMA, as shown in *Table 1*.

Table 1
Significantly Viewed Status of the Distant Stations in
Four Counties of the Mankato DMA
Per FCC's Significantly Viewed List

Mankato DMA	**Minneapolis-St. Paul DMA**			**Austin DMA**
Counties	**WCCO-TV**	**WFTC**	**KMSP-TV**	**KAAL**
Blue Earth				
Watonwan				
Brown				
Nicollet[50]				

The blocks shaded in green show the Distant Stations and the counties of the Mankato DMA in which the stations hold significantly viewed status by virtue of their inclusion in the Significantly Viewed List. The blocks shaded in dark gray indicate that KMSP-TV has not been declared significantly viewed in Watonwan County, and that WFTC and KAAL are not deemed significantly viewed in Nicollet County.

Section 76.54(a) states: "[S]ignals that are significantly viewed in a county . . . are deemed to be significantly viewed within all communities in the county." Thus, the state of affairs depicted by *Table 1* produces the inference, *per* Section 76.54(a), that (except as noted) the Distant Stations are significantly viewed in all communities in Blue Earth County, Watonwan County, Brown County and Nicollet County.

Twenty-four of those communities were studied in preparation for United's initial waiver request (the 'Subject Communities' or the '24 Communities'). These are shown in Table 2:

Table 2

[50] Only the southeastern tip of Nicollet County – comprising the community of North Mankato and a small part of the City of Mankato – is in the Mankato DMA.

Significantly Viewed Status of the Four Distant Stations in
24 Communities of the Mankato DMA
Per 47 C.F.R. §76.54(a)

Mankato DMA 24 Communities			Minneapolis-St. Paul DMA			Austin DMA
Zip ode	**Community**	**County**	**WCCO**	**WFTC**	**KMSP**	**KAAL**
56001	Mankato	Blue Earth				
56010	Amboy	Blue Earth				
56034	Garden City	Blue Earth				
56024	Eagle Lake	Blue Earth				
56037	Good Thunder	Blue Earth				
56055	Lake Crystal	Blue Earth				
56063	Madison Lake	Blue Earth				
56065	Mapleton	Blue Earth				
56078	Pemberton	Blue Earth				
56080	St. Clair	Blue Earth				
56090	Vernon Center	Blue Earth				
56022	Darfur	Watonwan				
56056	LaSalle	Watonwan				
56060	Lewisville	Watonwan				
56062	Madelia	Watonwan				
56081	St. James	Watonwan				
56030	Essig	Brown				
56084	Searles	Brown				
56019	Comfrey	Brown				
56041	Hanska	Brown				
56085	Sleepy Eye	Brown				
56087	Springfield	Brown				
56073	New Ulm	Brown				
56003	N. Mankato	Nicollet				

Each block shaded in green indicates that the Distant Station and the Subject Community in which the station is deemed significantly viewed. The blocks shaded in dark gray indicate communities in which KMSP-TV is not significantly viewed because it is not significantly viewed in Watonwan County, or that WFTC and KAAL are not significantly viewed in North Mankato because they are not significantly viewed in Nicollet County.

The data in *Table 2* thus comprise **89 Cases** (4 Distant Stations in 24 Communities minus the 7 communities in which WFTC, KMSP-TV, and KAAL are not significantly viewed).

* * *

In sum: *Table 1* and *Table 2* signify – facially -- the following state of affairs:

▶ Over-the-air signals of the Distant Stations are viewable in the Subject Communities, and

▶ The level of viewership of the Distant Stations in the Subject Communities is 'significant'.

B. ***Viewability of the Signals of the Distant Stations in the 89 Cases***

1. <u>Overview</u>

As noted, the concept of a station's being significantly viewed involves two dimensions: viewability and viewership. The possibility of a distant station's being 'significantly' viewed in a certain community depends at the threshold on the distant signal being viewable in that community. Viewability is thus an empirical premise of the Significantly Viewed Exception.

Measuring Viewability. The event of a household's receiving a viewable signal involves a receive antenna's 'locking onto' the radiated signal, the signal's subsequent conversion to a useable form of energy (electrical) as it is transmitted to a receiver input terminal, and the signal's then being (re-encoded into the intelligible information that constitutes a television picture. For that outcome to manifest, the signal at the receiver input terminal must have a level of strength at least sufficient to overcome the inherent 'noise' in the receiving system. The minimum signal strength must be -84 dBm or greater for UHF channels. For high-VHF and low-VHF channels, the required signal strength is -81 dBm or greater.

'Field strength' is a characterization relevant to the other end of the receiving system. It refers to the intensity of the electromagnetic field generated in the transmission of the signal by the station. The field intensity necessary at a household's receive antenna (where the signal is captured in the first instance) is calculated by 'working backwards' from the signal strength required at the receiver input terminal.[51]

Field strength is expressed in dB above one micro-volt per meter or dBu. The minimum field strength required for digital television coverage in the UHF band is 41 dBu. For low-VHF and high-VHF the figures are 28 and 36 dBu, respectively. In this Supplement, graphics for signal contour maps will indicate measurements in dBu.[52] References to signal strengths will be measurements in dBm.

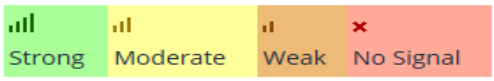
Methodological Orientation. Our orientation in composing the Viewability Tables was to condition for the most optimistic predictions from the perspective of the Distant Stations. As noted, the signal

[51] Specifically, "the minimum field strength needed to be available at the antenna is the sum of the minimum signal level needed at the receiver, the downlead line loss, and the dipole factor, less the antenna gain". *Report to Congress: The Satellite Home Viewer Extension and Reauthorization Act of 2004. Study of Digital Television Field Strength Standards and Testing Procedures*, ET Docket No. 05-182, released December 9, 2005, ¶15.

[52] *Id.* at ¶14. With respect to the entire receiving system, the minimum field strength which must be available at the antenna is 41 dBu for UHF channels and 28 dBu and 36 dBu, respectively, for low VHF and high VHF channels. *Id*. at ¶15. References to the 'noise-limited' contours of DTV stations are expressed in terms of dBu. With respect to the Distant Stations, the noise-limited contour for WCCO, WFTC and KAAL is 41 dBu. For KMSP-TV, it is 36 dBu.

strength values found in *Tables 3-6* were generated from the Commission's **DTV Reception Tool**.[53] The signal strength calculations assume an outdoor antenna 30 feet above ground level, the typical height of a rooftop antenna. The predictions are terrain-sensitive but the model does not account for building construction, neighboring buildings and trees, weather and other factors that generally would affect the probability of reception negatively were they considered (*i.e.*, the results would be less optimistic from the point of view of the Distant Stations). Interference is not accounted for in the DTV Reception Tool calculations.[54] If it were, the predictions would be still less optimistic.[55]

The DTV Reception Tool returns results in four viewability categories which the Commission identifies by this color scheme:



As explained, under the FCC's digital television standards for viewability, the minimum signal level required at the input terminal of a television receiver is -84.0 dBm for UHF channels and -81.0 dBm for low and high VHF channels.[56] In the DTV Reception Tool color scheme, signal levels worse than -84 dBm are classified by the FCC as 'No Signal' (red). For signals classified as 'Weak' (brown) the levels generally fall between -79 dBm and -86 dBm, as the DTV Reception Tool demarcates them.[57]

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[53]The DTV Reception Tool is found at **https://www.fcc.gov/media/engineering/dtvmaps**.The Commission recommends "us[ing] this program to check for the DTV signals that are available at your location." *Ibid*.

[54] Other digital television signal reception Tools tend to produce more conservative results (they predict reception less optimistically from the perspective of the Distant Stations). One of those is the highly-regarded 'Signal Analysis Tool' found at **http://www.tvfool.com/?option=com_wrapper&Itemid=29**. **Exhibit 2** *infra* contains Viewability Tables for signal strength values generated using that Tool.

[55] In addition, DTV service is subject to a 'cliff effect.' A very small decrease in signal strength causes full-quality service to become suddenly unavailable. This phenomenon is a further limiting consideration with respect to the range of viewability predictions.

[56] *Id*. at ¶18 ("In their comments, ABC, CBS, and NBC Television Affiliate Association (Network Affiliates) state that the Commission's planning factors established appropriate signal strength thresholds for reception of **real–world DTV signals**. These planning factors, Network Affiliates assert, contain a 'safety margin' to ensure that quality DTV reception is achievable precisely where the Commission expects it to be, namely, in the replicated analog TV service area.") (Emphasis added.)

[57] It is the nature of television signal propagation that the availability of television service at particular locations is inherently probabilistic. As noted earlier, the service area of a DTV station is the geographic area within the station's noise-limited contour where its signal is predicted to exceed the noise-limited service level. The noise-limited contour is characterized by a two-valued probability function – written

2. The Viewability Tables

(a) ***Viewability in the 89 Cases***. *Tables 3-6* contain viewability measures for each of the Distant Stations at each of the Relevant Communities in Blue Earth County, Watonwan County, Brown County and Nicollet County.[58] The approach measures viewability based on the signal strength of a Distant Station at a Subject Community. The tables show the predicted signal strength for each Distant Station at each of the 24 Communities, reflecting the color scheme and classifications described above ('No Signal' = red; 'Weak' signal = brown. In none of the 89 Cases did the DTV Reception Tool return results indicating a signal strength that is 'Moderate' or 'Strong').

The tables also indicate the coordinates of each community, the transmitter coordinates of the Distant Stations, and the distance in miles between the communities and the stations' transmit sites. Cells marked with the symbol '>dBm' are cases in which a station does not appear at all in the results because its predicted signal is simply too weak.

Table 3
Viewability of the Distant Stations
For Subject Communities in **Blue Earth County**

Mankato DMA			**Minneapolis-St. Paul DMA**			**Austin DMA**
Zip code	**Community**	**County**	**WCCO-TV** 45.062222 -93.139167	**WFTC** 45.058333 -93.124167	**KMSP-TV** 45.058333 -93.124167	**KAAL** 43.642778 -92.526389
56001	Mankato 44.164503 -93.993798	Blue Earth	-95 dBm 74.9 miles	-97 dBm 75.2 miles	-96 dBm 75.2 miles	> dBm 81.6 miles
56010	Amboy 43.887268 -94.157516	Blue Earth	> dBm 95.4 miles	> dBm 95.6 miles	> dBm 95.6 miles	> dBm 83.3 miles
56034	Garden City 44.04704 -94.16714	Blue Earth	-97 dBm 86.5 miles	-98 dBm 86.7 miles	> dBm 86.7 miles	> dBm 86.6 miles

"F(50, 90)" – that describes the outer edge of a region in which signal strength is predicted to exceed the field strength standard at 50 percent of the potential receive locations 90 percent of the time. Television service is considered 'available' at locations where the station's signal strength exceeds the noise-limited service levels described herein. The predictions assume the use of the terrain-dependent Longley-Rice point-to-point propagation model. *See* 47 C.F.R. §73.622(e)(1).

[58] With respect to Nicollet County, only the southern tip of the County -- comprising North Mankato and part of the City of Mankato – is in KEYC-TV's DMA.

56024	Eagle Lake 44.161128 -93.882517	Blue Earth	-86 dBm 72.2 miles	-88 dBm 72.3 miles	-88 dBm 72.3 miles	-98 dBm 76.6 miles
56037	Good Thunder 44.004284 -94.069117	Blue Earth	-98 dBm 86.3 miles	-99 dBm 86.5 miles	-98 dBm 86.5 miles	> dBm 81.1 miles
56055	Lake Crystal 44.106311 -94.218075	Blue Earth	-94 dBm 84.8 miles	-99 dBm 85.0 miles	-96 dBm 85.0 miles	> dBm 90.3 miles
56063	Madison Lake 44.203869 -93.813214	Blue Earth	-79 dBm 67.9 miles	-81 dBm 68.1 miles	-84 dBm 68.1 miles	-99 dBm 75.0 miles
56065	Mapleton 43.927118 -93.955400	Blue Earth	-98 dBm 88.1 miles	-99 dBm 88.2 miles	-98 dBm 88.2 miles	-94 dBm 73.9 miles
56078	Pemberton 44.007872 - 93.783038	Blue Earth	-92 dBm 79.4 miles	-94 dBm 79.5 miles	-95 dBm 79.5 miles	-89 dBm 67.6 miles
56080	St. Clair 44.081054 -93.857765	Blue Earth	-93 dBm 76.5 miles	-94 dBm 76.6 miles	-93 dBm 76.6 miles	-90 dBm 73.1 miles
56090	Vernon Center 43.962287 -94.168266	Blue Earth	-98 dBm 91.4 miles	> dBm 91.6 miles	> dBm 91.6 miles	> dBm 85.0 miles

Table 4
Viewability of the Distant Stations
For Subject Communities in **Watonwan County**

Mankato DMA			**Minneapolis-St. Paul DMA**			**Austin DMA**
Zip code	**Community**	**County**	**WCCO-TV** 45.062222 -93.139167	**WFTC** 45.058333 -93.124167	**KMSP-TV** 45.058333 -93.124167	**KAAL** 43.642778 -92.526389
56022	Darfur 44.051779 -94.837374	Watonwan	> dBm 109.1 miles	> dBm 109.5 miles		> dBm 118.9 miles
56056	LaSalle 44.07076 -94.56955	Watonwan	> dBm 98.3 miles	> dBm 98.7 miles		> dBm 106.3 miles
56060	Lewisville 43.922910 -94.436705	Watonwan	> dBm 101.5 miles	> dBm 101.7 miles		> dBm 97.5 miles
56062	Madelia 44.050219 -94.*415835	Watonwan	> dBm 94.1 miles	> dBm 94.4 miles		> dBm 98.5 miles
56081	St. James 43.982285 - 94.628111	Watonwan	> dBm 104.7 miles	> dBm 105.1 miles		> dBm 107.6 miles

Table 5
Viewability of the Distant Stations
For Subject Communities in **Brown County**

Mankato DMA			Minneapolis-St. Paul DMA			Austin DMA
Zip code	**Community**	**County**	**WCCO-TV** 45.062222 -93.139167	**WFTC** 45.058333 -93.124167	**KMSP-TV** 45.058333 -93.124167	**KAAL** 43.642778 -92.526389
56030	Essig 44.32431 -94.60465	Brown	> dBm 88.3 miles	> dBm 88.8 miles	> dBm 88.8 miles	> dBm 113.8 miles
56084	Searles 44.22864 -94.43251	Brown	-93 dBm 85.9 miles	-97 dBm 86.3 miles	-95 dBm 86.3 miles	> dBm 103.3 miles
56019	Comfrey 44.109328 -94.904116	Brown	> dBm 109.1 miles	> dBm 109.6 miles	> dBm 109.6 miles	> dBm 123.0 miles
56041	Hanska 44.149918 -94.494801	Brown	> dBm 91.8 miles	> dBm 92.2 miles	> dBm 92.2 miles	> dBm 104.3 miles
56085	Sleepy Eye 44.295656 -94.723704	Brown	> dBm 94.3 miles	> dBm 94.8 miles	> dBm 94.8 miles	> dBm 118.5 miles
56087	Springfield 44.239409 -94.978598	Brown	> dBm 106.9 miles	> dBm 107.5 miles	> dBm 107.5 miles	> dBm 129.1 miles
56073	New Ulm 44.311944 -94.463055	Brown	> dBm 83.3 miles	> dBm 83.7 miles	> dBm 83.7 miles	> dBm 107.0 miles

Table 6
Viewability of the Distant Stations
For North Mankato in **Nicollet County**

Mankato DMA			Minneapolis-St. Paul DMA			Austin DMA
Zip code	**Community**	**County**	**WCCO-TV** 45.062222 -93.139167	**WFTC** 45.058333 -93.124167	**KMSP-TV** 45.058333 -93.124167	**KAAL** 43.642778 -92.526389
56003	North Mankato 44.176514 -94.028382	Nicollet	-83dBm 75.2 miles		-84 dBm 75.5 miles	

The data in *Tables 3 – 6* can be summarized. With respect to the 89 Cases, the DTV Reception Tool generates the following results: In 93 percent of the cases (83 out of 89), the output is 'No Signal' (red). In the remaining 7 percent of the cases (6 out of 89), the predicted signal is 'Weak' (brown).

(b) *The FCC's Findings in MB Docket No. 15-43*

The information yielded by the *Viewability Tables* is consistent with the FCC's findings in *Designated Market Areas: Report to Congress Pursuant to Section 109 of the STELA Reauthorization Act of 2014* (MB Docket No. 15-43), Report, released June 3, 2016 ('*2016 Report to Congress*').[59] In Section 109(a) of the statute, STELAR, Congress directed the Commission to "analyze the extent to which consumers in each local television market have access to . . . out-of-market television stations received over the air."[60]

The FCC explained its methodology for assessing viewability as follows:

> The data set forth in this Report are based on [the Longley-Rice propagation model] . . . regarding the availability of broadcast stations received over the air predictive model regarding the availability of broadcast television stations via over the air transmission . . . [W]e believe this approach yields the most accurate data with respect to the analysis required by Section 109(a)(1)(A).[61]

List 5 in Appendix A of the *2016 Report to Congress* "provides a complete listing of every out-of-market full power broadcast television station, commercial or noncommercial, that can be received over the air."[62] We have summarized in *Table 7* below the data from List 5, Appendix A as it relates to the 24 Communities. Red shading indicates those cases in which the predicted signal level is insufficient for television reception, according to the *2016 Report to Congress*.[63]

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[59] *Designated Market Areas: Report to Congress Pursuant to Section 109 of the STELA Reauthorization Act of 2014*, MB Docket No. 15-43. 31 FCC Rcd 5463, n. 55 (2016) ("*2016 Report to Congress*"). 'STELA' is the Satellite Television Extension and Localism Act of 2010; 'STELAR' is the STELA Reauthorization Act of 2014.

[60] *Id*. at ¶ 38 and n. 125, and ¶ 40.

[61] *Ibid.*

[62] *Id*. at ¶ 40.

[63] *See also OET Bulletin No. 73* ("As defined by STELA, a viewer location is 'served' or 'unserved' depending on whether the signal strength received at that location is at least equal to, or is less than, respectively, the noise-limited service level with a certain statistical probability as set forth in the FCC Rules").

Table 7

Viewability Data Derived from List 5,
Appendix A, of ***2016 Report to Congress***

Mankato DMA 24 Communities			Minneapolis-St. Paul DMA			Austin DMA
Zip code	**Community**	**County**	**WCCO**	**WFTC**	**KMSP**	**KAAL**
56001	Mankato	Blue Earth				
56010	Amboy	Blue Earth				
56034	Garden City	Blue Earth				
56024	Eagle Lake	Blue Earth				
56037	Good Thunder	Blue Earth				
56055	Lake Crystal	Blue Earth				
56063	Madison Lake	Blue Earth				
56065	Mapleton	Blue Earth				
56078	Pemberton	Blue Earth				
56080	St. Clair	Blue Earth				
56090	Vernon Center	Blue Earth				
56022	Darfur	Watonwan				
56056	LaSalle	Watonwan				
56060	Lewisville	Watonwan				
56062	Madelia	Watonwan				
56081	St. James	Watonwan				
56030	Essig	Brown				
56084	Searles	Brown				
56019	Comfrey	Brown				
56041	Hanska	Brown				
56085	Sleepy Eye	Brown				
56087	Springfield	Brown				
56073	New Ulm	Brown				
56003	N. Mankato	Nicollet				

The Commission's findings as summarized above show that the signals of the Distant Stations are predicted to be uniformly *unviewable* throughout Blue Earth, Watonwan and Brown counties, except to the extent that the signal of KMSP-TV is deemed to reach 2 percent of the population of Blue Earth County.[64] This 2 percent figure is no doubt more accurate, but *less optimistic* (from the perspective of KMSP-TV) than the viewability data for Blue Earth County that we presented in *Table 3*, *infra*.

Table 3 indicates that the Distant Stations are uniformly unviewable in Blue Earth County, except that in Eagle Lake and Madison Lake, the signals of KMSP-TV, WFTC and WCCO-TV are 'weak.'

[64] The Commission acknowledged in the *2016 Report to Congress* that "not every in-market or out-of-market full power television signal analyzed reaches 100 percent of either a county or DMA." *Id*. at ¶46. It therefore adopted a weighted distribution methodology to more accurately reflect the actual extent of coverage. In Blue Earth County that figure is 2 percent. *Id*., Appendix A, List 5, P 266 of 455.

Assume that a 'weak' signal is nonetheless viewable. The population of Blue Earth County (2016) is 66,441. The populations of Eagle Lake and Madison Lake are 2992 (2016 est.) and 1141 (2016 (est.), respectively. According to Appendix A, List 5, KMSP-TV's over-the-air signal reaches 2 percent of the population of Blue Earth County, or 1329 persons. The populations of Eagle Lake and Madison Lake total 4133 persons. Thus, the FCC's prediction with respect to KMSP-TV's over-the-air signal in Blue Earth County is only a fraction as optimistic as the signal values we have presented in *Table 3*.

With respect to Nicollet County, the Commission's findings in the *2016 Report to Congress* as summarized in *Table 7* indicate that 6 percent of the homes in the County are predicted to receive a viewable signal from WCCO-TV[65] and 24 percent are predicted to receive a viewable signal from KMSP-TV.[66]

As we explained in **Footnote 6**, Nicollet is a bifurcated county in the Nielsen schema. The southern-most part of Nicollet County – essentially the community of North Mankato – is assigned to the Mankato DMA. The rest of the County is assigned to the Minneapolis-St. Paul DMA. Our *Table 6* contains the signal strength predictions for WCCO-TV and KMSP-TV with respect to North Mankato (WFTC and KAAL are disregarded because they are not significantly viewed in Nicollet County.) Table 6 indicates that the over-the-air signals of WCCO-TV and KMSP-TV are 'weak.' Assume *arguendo* that a 'weak' signal is nonetheless viewable and assume further that the population percentages shown in Appendix A, List 5 relate entirely to the North Mankato area.[67] The population of Nicollet County is 33,575 (2016). The population of North Mankato is 13,529 (2015). The 6 percent prediction (or 2015 people) and the 24 percent prediction (or 8058 people) generated in the *2016 Report to Congress* are therefore markedly *less optimistic* than the viewability data we present in *Table 6*.

(c) Explaining the Incongruity between Tables 1-2 and Tables 3-6. The disparity between *Tables 1-2* and *Tables 3-6* can be seen in the juxtaposition below. We have reduced the size of the tables to emphasize the patterned, table-wide incongruity.

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[65] *Id*., Appendix A, List 5, P 261 of 455.

[66] *Id*., Appendix A, List 5, P 266 of 455.

[67] In actuality, that portion of Nicollet County northeast of North Mankato (e.g., St. Peter) is where over-the-air reception of the Distant Stations is likely, and not in North Mankato. As noted elsewhere, at the KEYC-TV studios in North Mankato, neither KMSP-TV nor any other of the Distant Stations has a viewable signal. In contrast, the CTV translators repeating the Twin Cities Distant Stations' signals deliver perfectly viewable pictures.

Figure 4

Conflict Between Viewability per Significantly Viewed List
and Viewability Derived from FCC's DTV Reception Tool

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Viewability Per Significantly Viewed List

Mankato DMA 24 Communities			Minneapolis-St. Paul DMA			Austin DMA
Zip ode	Community	County	WCCO	WFTC	KMSP	KAAL
56001	Mankato	Blue Earth				
56010	Amboy	Blue Earth				
56034	Garden City	Blue Earth				
56024	Eagle Lake	Blue Earth				
56037	Good Thunder	Blue Earth				
56055	Lake Crystal	Blue Earth				
56063	Madison Lake	Blue Earth				
56065	Mapleton	Blue Earth				
56078	Pemberton	Blue Earth				
56080	St. Clair	Blue Earth				
56090	Vernon Center	Blue Earth				
56022	Darfur	Watonwan				
56056	LaSalle	Watonwan				
56060	Lewisville	Watonwan				
56062	Madelia	Watonwan				
56081	St. James	Watonwan				
56030	Essig	Brown				
56084	Searles	Brown				
56019	Comfrey	Brown				
56041	Hanska	Brown				
56085	Sleepy Eye	Brown				
56087	Springfield	Brown				
56073	New Ulm	Brown				
56003	N. Mankato	Nicollet				

Viewability Per FCC DTV Reception Tool

Mankato DMA			Minneapolis-St. Paul DMA			Austin DMA
Zip ode	Community	County	WCCO	WFTC	KMSP	KAAL
56001	Mankato	Blue Earth	-95	-97	-96	-
56010	Amboy	Blue Earth	-	-	-	-
56034	Garden City	Blue Earth	-97	-98	-	-
56024	Eagle Lake	Blue Earth	-86	-88	-88	-98
56037	Good Thunder	Blue Earth	-98	-99	-98	-
56055	Lake Crystal	Blue Earth	-94	-99	-96-	-
56063	Madison Lake	Blue Earth	-79	-81	-84	-99
56065	Mapleton	Blue Earth	-98	-99	-98	-94
56078	Pemberton	Blue Earth	-92	-94	-95	-89
56080	St. Clair	Blue Earth	-93	-94	-93	-90
56090	Vernon Center	Blue Earth	-98	-	-	-
56022	Darfur	Watonwan	-	-	-	-
56056	LaSalle	Watonwan	-	-	-	-
56060	Lewisville	Watonwan	-	-	-	-
56062	Madelia	Watonwan	-	-	-	-
56081	St. James	Watonwan	-	-	-	-
56030	Essig	Brown	-	-	-	-
56084	Searles	Brown	-93	-97	-95	-
56019	Comfrey	Brown	-	-	-	-
56041	Hanska	Brown	-	-	-	-
56085	Sleepy Eye	Brown	-	-	-	-
56087	Springfield	Brown	-	-	-	-
56073	New Ulm	Brown	-98	-99	-98	-
56003	North Mankato	Nicollet	-83		-84	

The pattern of data reflected in *Tables 3 – 6* (generated with the Commission's DTV Reception Tool) and the pattern of data reflected in *Tables 1 – 2* (derived from the Significantly Viewed List) could not be in starker conflict. The same mismatch applies to the respective data patterns of *Table 7* (derived from the FCC's findings in the *2016 Report to Congress*) and *Tables 1 – 2*. That the conflicts manifest in patterns strongly discounts the possibility that case by case measurements would show different results.

Moreover, where there is a significant conflict in the patterns that each data set manifests, the usual explanation is that the measurements proceeded from different suppositions about the phenomenon being described. In the instant case, that phenomenon is the behavior of the signals of the Distant Stations. If *Tables 1 – 2* were accurate, it would mean the signals of the Distant Stations are viewable at distances inconsistent with the nature of television signals.

How, then, did the Distant Stations acquire Significantly Viewed status in the first place?

In Section I(B), we noted two methodological features of the Arbitron surveys that were used when the original Significantly Viewed List was created: (A) the original SV List included viewing attributable to translator audiences, and (B) if a station was determined to be significantly viewed in one community in a county, it was deemed to be significantly viewed in all communities in the county.

These factors created the possibility of the following provenance for a television station found on the Significantly Viewed List today:

> In the Arbitron surveys of 1970-71, viewership reported for Station X in County Y was based on viewership in a single community, the viewership was a translator audience, and the viewership was 'significant'. The actual over-the-air signal of Station X was not viewable in that community or in most communities in County Y, including Community Z. Result: Station X was deemed significantly viewed in all communities in County Y, including Community Z. That status has been transmitted through time – and today, 45 years later, Station X holds significantly viewed status with respect to Community Z, even though the signal of Station X is not and never was directly viewable in Community Z.

In 1970-71 this dynamic was at work in southwestern Minnesota. Since the 1960s, translators have re-transmitted the signals of the Minneapolis-St. Paul television stations throughout this rural region of the state, which includes much of the Mankato market area. The signals of the Distant Stations were not historically able to reach most of those communities, and they do not do so today. (Because of the 'digital cliff' there is even less chance of distant viewing now than then.) But a consequence of the original Arbitron methodology was that the Distant Stations acquired significantly viewed status throughout the region. This status having been incorporated in the 1972 Significantly Viewed List was transmitted through time.

From this state of affairs the data pattern in *Table 2* emerges. The genealogy of the Distant Stations' significantly viewed status[68] is what accounts for the fact that the stations are today deemed significantly

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[68] Three of the four Distant Stations appeared on the original Significantly Viewed List: WCCO-TV, KMSP-TV, and KAAL. WCCO-TV first aired in July 1949 (original call sign WTCN, 1949-1952). KMSP-TV first aired in January 1959 (original call sign KEYD, 1955-56, then KMGM, 1956-58). KAAL first aired in August 1953 (original call sign KMMT, 1953-1968, KAUS, 1968-1975). WFTC first aired in October 1982 (original call sign KFBT, 1982-84, then KITN, 1984-1994). The introductory paragraph of the current version of the Significantly Viewed List explains that stations and counties are original 1972 entries unless notated by a (+) sign (indicating "those stations added to the list after the publication of the Commission's original 1972 list").

WFTC is notated by a (+) sign with respect to Blue Earth County, Watonwan, and Brown Counties, among others. WFTC acquired significantly viewed status in Watonwan and Brown Counties in 1993 (under call sign KITN). *See Cable Television Actions*, July 12, 1993, Report No. 3459 (CSR 3810 and CSR 3811), 993 FCC LEXIS 3517 ("Granted, pursuant to § 0.283, . . . after the submission of

viewed in communities in which their signals are not viewable. This likewise explains the conflict between *Table 2* and *Tables 3-6.*

The data conflicts we have described also illuminate the nature and magnitude of the challenge that has perennially confronted KEYC-TV. The Distant Stations, by virtue of their presence on the Significantly Viewed List, acquired substantial legal rights relating to signal carriage. Conversely, by virtue of the Distant Stations' regulatory status as significantly viewed, the program exclusivity rights of KEYC-TV have been disabled literally for decades.

Fortunately, the FCC's Waiver Procedure is available. This was a failsafe the Commission sanctioned from the beginning. In testimony to Congress just prior to the seminal 1972 proceeding that spawned the Significantly Viewed List, the Commission said:

> We should stress that while these policies will generally govern our disposition of cable matters as they come before us, there are always exceptional situations that call for exceptional actions. *The very purpose of an administrative agency is to insure flexibility to act in the public interest in particular situations*. In this area of operation under new policies, we will be alert to such special situations as they arise and will tailor our actions accordingly.[69]

The Waiver Procedure is meant to reveal the underlying empirical reality about contended significantly viewed classifications. Regardless of errors the Significantly Viewed List contains today – either because the original errors have been transmitted through the years or because viewing patterns or demographics have changed – the Waiver Procedure is designed to identify cases in which a distant station should no longer be classified as significantly viewed with respect to a particular community or to confirm that such status properly should continue.

Accordingly, we turn to the application of the Waiver Procedure and the Nielsen studies that informed United's Petition for Special Relief.

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significantly viewed surveys on behalf of Station KITN-TV"). Considering that WFTC's over-the-air signal is not viewable in Watonwan or Brown Counties, it is reasonable to assume that the viewing surveys were based on translator viewership. There does not appear to be an online record indicating when WFTC acquired significantly viewed status in Blue Earth County.

[69] *Commission Proposals for Regulation of Cable Television*, 31 FCC 2d 115 (1971) (emphasis added). *See also Cable Television Report and Order*, 36 FCC 2d 143, ¶71 (1972) ("As with any general policy, there may well be exceptional cases – as to a particular market or, more likely, a particular station in that market. In such an event, we would be prepared to take appropriate action under the special relief provisions of the rules [citing 47 C.F.R. §76.7]").

C. ***Nielsen Data***

1. <u>The Waiver Procedure is Designed to Reveal Empirical Reality</u>

When Nielsen is commissioned to generate statistics for an analysis of significant viewing, it re-tabulates data from existing television surveys, isolating diaries from Non-cable/Non-ADS Households in the target communities.[70] Once the criteria for waiver of the Significantly Viewed Exception are applied to the Nielsen statistics, one of three legal conclusions should obtain with respect to each distant station and each community:

(1) An insufficient number of diaries were returned. In that event, the waiver analysis can go no further and the distant station retains the significantly viewed status it holds by virtue of the Significantly Viewed List. In the following tables these cases are shaded in dark green.

(2) Viewership measurements of the distant station satisfy the significantly viewed criteria – in which case the distant station likewise maintains its status as significantly viewed per the Significant Viewing List. In the following tables these cases are shaded in light green.

(3) The viewership measurements of a particular distant station in a particular community show that the station no longer qualifies as significantly viewed. In that event, a petitioner can require that the station's network or syndicated exclusivity programming be deleted from the cable offering in that community. In the tables below, these cases are shaded in red.

Notwithstanding the logical plan described above, as shown *infra,* conclusions (1) and (2) are invalid where the subject stations are not actually viewable in the studied communities, and the measurements of viewing reported by Nielsen are not viewing of the distant stations at all, but only of translators rebroadcasting those stations in locations far away from those covered by the stations' actual signals.

[70] When Nielsen is commissioned to generate studies for significantly viewed purposes, the client gives Nielsen the names of the cable communities in question. The company's methodology relies on zip codes for community designations, so community names are associated with their zip codes. Inasmuch as the Nielsen studies in the present case reflect that standard practice, we have included zip codes in the tables contained in this Supplement.

2. The Nielsen Tables

Table 8
Results of Nielsen Study for
Communities in **Blue Earth County**

Mankato DMA Blue Earth County			Minneapolis-St. Paul DMA			Austin DMA
Zip code	**Community**	**County**	**WCCO-TV**	**WFTC**	**KMSP-TV**	**KAAL**
56001	Mankato	Blue Earth				
56010	Amboy	Blue Earth				
56034	Garden City	Blue Earth				
56024	Eagle Lake	Blue Earth				
56037	Good Thunder	Blue Earth				
56055	Lake Crystal	Blue Earth				
56063	Madison Lake	Blue Earth				
56065	Mapleton	Blue Earth				
56078	Pemberton	Blue Earth				
56080	St. Clair	Blue Earth				
56090	Vernon Center	Blue Earth				

Table 8 shows the following with respect to communities in Blue Earth County: In 12 cases an insufficient number of diaries were returned (dark green shading). The waiver analysis would end, assuming *arguendo* that the Viewability component of the significantly-viewed Exception were satisfied, and the Distant Stations would retain their significantly viewed status. In 23 cases (light green shading) Nielsen's viewership measurements would allow the Distant Stations to continue to satisfy the significantly viewed criteria, if only such measurements were based on viewing of the Distant Stations directly rather than of the CTV translators. These stations would retain their significantly viewed status. In 9 cases (red shading), viewership measurements of a particular distant station in a particular community indicated the station no longer qualifies as significantly viewed.

In sum: There are 44 cases relating to Blue Earth County. In 35 of those cases, the Distant Stations would retain their significantly viewed status *if* the reported viewing were valid direct viewing of the Distant Stations rather than translator viewing. In 9 cases they will not retain that status, regardless of the source.

Table 9
Results of Nielsen Study for
Communities in **Watonwan County**

Mankato DMA Watonwan County			Minneapolis-St. Paul DMA			Austin DMA
Zip code	**Community**	**County**	**WCCO-TV**	**WFTC**	**KMSP-TV**	**KAAL**
56022	Darfur	Watonwan				
56056	LaSalle	Watonwan				
56060	Lewisville	Watonwan				
56062	Madelia	Watonwan				
56081	St. James	Watonwan				

In sum: There are 15 cases relating to Watonwan County. In 12 of those cases, the Distant Stations would retain their significantly viewed status if the Viewability dimension of the significantly-viewed Exception were satisfied (which it is not). In three cases (two of which relate to KAAL) they will not retain that status.

Table 10
Results of Nielsen Study for
Communities in **Brown County**

Mankato DMA Brown County			Minneapolis-St. Paul DMA			Austin DMA
Zip code	**Community**	**County**	**WCCO-TV**	**WFTC**	**KMSP-TV**	**KAAL**
56030	Essig	Brown				
56084	Searles	Brown				
56019	Comfrey	Brown				
56041	Hanska	Brown				
56085	Sleepy Eye	Brown				
56087	Springfield	Brown				
56073	New Ulm	Brown				

In sum: There are 28 cases relating to Brown County. In 22 of those cases, the Distant Stations would retain their significantly viewed status if it there were any basis to believe that their signals were directly viewable off air in Brown County. In six cases (four of which relate to KAAL), they will not retain that status even without considering Viewability as a factor.

Table 11
Results of Nielsen Study for
Communities in **Nicollet County**

Mankato DMA Nicollet County			**Minneapolis-St. Paul DMA**			**Austin DMA**
Zip code	**Community**	**County**	**WCCO-TV**	**WFTC**	**KMSP-TV**	**KAAL**
56003	North Mankato	Nicollet				

In sum: There are 2 cases relating to Nicollet County. In the case of WCCO-TV, the Distant Station will not retain its significantly viewed status even without considering the artificial boost it receives in the Nielsen data from the CTV translator repeating WCCO-TV from the Godahl/St. James tower. In the other, KMSP-TV would continue to be deemed significantly-viewed if the Commission failed to appreciate that the reported viewing of KMSP-TV there is a product of the stronger signal of the CTV translator repeating KMSP-TV rather than of the parent station with its predicted signal level at the very minimum level. See Table 14 below.

Viewed together, *Tables 8-11* convey the following Nielsen study results: There are 89 cases relating to Distant Station viewership in Blue Earth County, Watonwan County, Brown County and Nicollet County. In 70 of those cases, the Distant Stations would retain their significantly viewed status if the Nielsen statistics were based on direct viewing rather than viewing of the CTV translators. In 19 cases they will not retain that status even ignoring the effect of the CTV translators.

3. The Incongruity Between the Nielsen Tables and the Viewability Tables

A Nielsen statistic indicating that a particular Distant Station's viewership is 'significant' in a Subject Community implies that the signal of the Distant Station is viewable in that community. Conversely, if the signal of a particular Distant Station is not viewable over-the-air in the community, in a perfect world the Nielsen study should reflect this in viewership measurements of zero. In other words, Nielsen statistics theoretically should convey viewability as well as viewership information.

The Nielsen methodology is therefore well designed to reveal the actual empirical reality of a matter, just as the Commission's Waiver Procedure intends. This means that the data contained in the *Viewability Tables* and the viewability data implicit in the *Nielsen Tables* should be harmonious.

But that is not the case. For example, Viewability *Table 3* contains a case relating to the viewability of Distant Station WCCO-TV at Lake Crystal, Minnesota, one of the communities in Blue Earth County in which WCCO-TV has been declared significantly viewed. *Table 3* indicates a signal level of -94 dBm for WCCO-TV at this location. This signal strength is woefully inadequate for households at Lake Crystal to receive WCCO-TV's signal over-the-air signal. If the WCCO-TV signal is not viewable at Lake Crystal, WCCO-TV cannot be viewed there, much less 'significantly' viewed. We should expect the Nielsen statistics for WCCO-TV at Lake Crystal (*Table 8*) to confirm this. But they do not. Those statistics indicate that WCCO-TV satisfies the criteria to sustain its significantly viewed status. This entails the ostensible empirical reality that WCCO-TV's signal is viewable at Lake Crystal, which is false.

Or again, *Table 3* indicates a signal level of -98 dBm (a non-viewable signal) for Distant Station KMSP-TV at Good Thunder in Blue Earth County. Yet the Nielsen data (at *Table 8*) show that the viewership statistics of the station meet the criteria for the station to sustain its significantly viewed status. This would entail that KMSP-TV's signal is Viewable at Vernon Center, which is false.

Indeed in numerous instances, the viewability data conflict with the Nielsen data. This conflict is not episodic or of a sort that could be explained away case by case. It is systemic and patterned.

The scope of this disparity can be visualized by juxtaposing the *Viewability Tables* and the *Nielsen Tables.* We have reduced the size of the tables to show the patterned, table-wide incongruity.

Figure 5

Conflict Between Viewability Tables and Nielsen Tables

Results of Viewability Studies per FCC's DTV Reception Tool

83 Cases – Distant Station Not Viewable
6 Cases – Distant Station Viewable

Mankato DMA			Minneapolis-St. Paul DMA			Austin DMA
Zip ode	Community	County	WCCO	WFTC	KMSP	KAAL
56001	Mankato	Blue Earth	-95	-97	-96	-
56010	Amboy	Blue Earth	-	-	-	-
56034	Garden City	Blue Earth	-97	-98	-	-
56024	Eagle Lake	Blue Earth	-86	-88	-88	-98
56037	Good Thunder	Blue Earth	-98	-99	-98	-
56055	Lake Crystal	Blue Earth	-94	-99	-96-	-
56063	Madison Lake	Blue Earth	-79	-81	-84	-99
56065	Mapleton	Blue Earth	-98	-99	-98	-94
56078	Pemberton	Blue Earth	-92	-94	-95	-89
56080	St. Clair	Blue Earth	-93	-94	-93	-90
56090	Vernon Center	Blue Earth	-98	-	-	-
56022	Darfur	Watonwan	-	-	-	-
56056	LaSalle	Watonwan	-	-		-
56060	Lewisville	Watonwan	-	-	-	-
56062	Madelia	Watonwan	-	-	-	-
56081	St. James	Watonwan	-	-	-	-
56030	Essig	Brown	-	-	-	-
56084	Searles	Brown	-93	-97	-95	-
56019	Comfrey	Brown	-	-	-	-
56041	Hanska	Brown	-	-	-	-
56085	Sleepy Eye	Brown	-	-	-	-
56087	Springfield	Brown	-	-	-	-
56073	New Ulm	Brown	-98	-99	-98	-
56003	North Mankato	Nicollet	-83		-84	

Results of Nielsen Studies

70 Cases – Distant Station Retains SV status
19 Cases – Distant Station Does Not Retain SV Status

Mankato DMA 24 Communities			Minneapolis-St. Paul DMA			Austin DMA
Zip code	Community	County	WCCO	WFTC	KMSP	KAAL
56001	Mankato	Blue Earth				
56010	Amboy	Blue Earth				
56034	Garden City	Blue Earth				
56024	Eagle Lake	Blue Earth				
56037	Good Thunder	Blue Earth				
56055	Lake Crystal	Blue Earth				
56063	Madison Lake	Blue Earth				
56065	Mapleton	Blue Earth				
56078	Pemberton	Blue Earth				
56080	St. Clair	Blue Earth				
56090	Vernon Center	Blue Earth				
56022	Darfur	Watonwan				
56056	LaSalle	Watonwan				
56060	Lewisville	Watonwan				
56062	Madelia	Watonwan				
56081	St. James	Watonwan				
56030	Essig	Brown				
56084	Searles	Brown				
56019	Comfrey	Brown				
56041	Hanska	Brown				
56085	Sleepy Eye	Brown				
56087	Springfield	Brown				
56073	New Ulm	Brown				
56003	North Mankato	Nicollet				

What accounts for the conflict between the *Viewability Tables* and the *Nielsen Tables*?

The Commission's procedure for broadcasters to seek a waiver of the Significantly Viewed Exception requires statistical evidence of over-the-air viewing of a distant station's programming. **Nielsen television audience surveys** do not make a distinction between over-the-air viewing of a Distant Station's programming and over-the-air viewing of the re-transmission of that programming via translators.[71] To the extent that the Nielsen studies did report over-the-air viewership, such viewership

[71] As explained earlier, when Nielsen is commissioned to generate viewing statistics for purposes of a significantly viewed analysis, it re-tabulates data from recently-compiled television surveys, isolating diaries from Non-cable/Non-ADS Households in the communities the client specifies. Nielsen's general television audience survey methodology, however, does not categorize over-the-air translator viewership separately.

resulted from the reception of translator signals, not of direct reception of the signals of the Distant Stations.

We detail these dynamics in the next section.

D. *The Subject Communities, the Distant Stations, and the CTV Translator Network*

The Distant Stations do not transmit viewable over-the-air signals in most of the 24 Communities. Viewing of the Distant Stations is a function of penetration by cable television, direct-to-home satellite television, or translators.[72]

1. The CTV Translator Network

The translators are not licensed to or owned by the Twin Cities Distant Stations. They are part of a network of 40 translators[73] owned by Cooperative Television of Southern Minnesota (CTV) or its constituent entities.[74]

As noted above, the nodes of the system are three translator towers at St. James/Godahl, Frost and Jackson, Minnesota. CTV explains on its website the process of acquiring the distant signals. They are "brought by fiber optic cable to all three towers from the Twin Cities." This procedure ensures that "no signal degradation" of the Twin Cities Distant Signals occurs and that when the signals are re-transmitted from the CTV towers throughout KEYC's market area they are "of the same quality as broadcasted in the Twin Cities."[75]

Figures 6 and 7 below illustrate this state of affairs. *The blue shaded area in Figure 7 is KEYC-TV's DMA*. The black teardrops are the 24 Communities in which KEYC-TV seeks program exclusivity protection.

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[72] "Digital TV translator stations provide a means whereby the signals of DTV broadcast stations may be retransmitted to areas in which direct reception of such DTV stations is unsatisfactory due to distance or intervening terrain barriers." 47 C.F.R. §74.790(a).

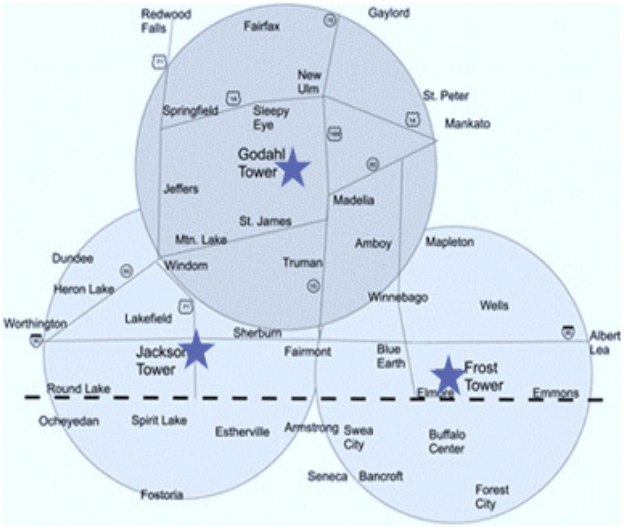
[73] *See* **Exhibit 3**.

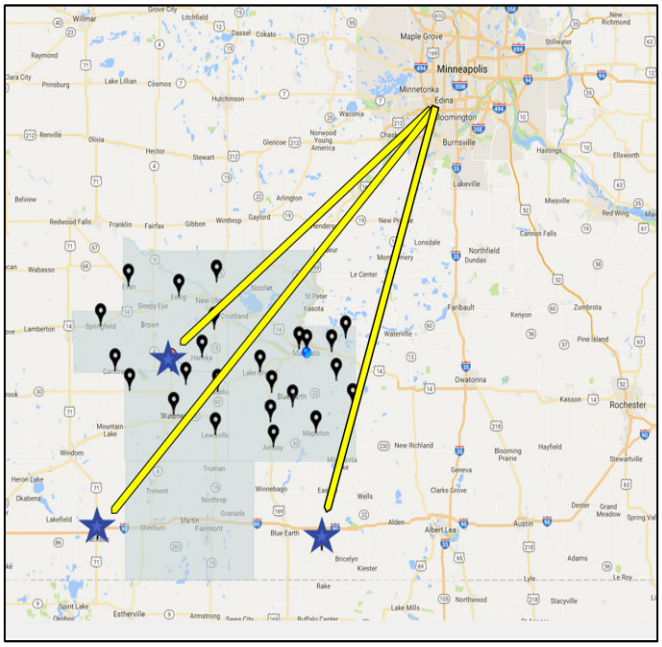
[74] CTV is owned by four local electric co-ops – Federated Rural Electric, South Central Electric Association, Brown County Rural Electric Association and BENCO Electric Cooperative. *See* **http://ctv.coop/index.php?page=7**.

[75] *See* **http://ctv.coop/index.php?page=8**.

CTV Architecture

Figure 6	Figure 7
CTV Translator Network Translator Towers at St. James, Jackson & Frost	Signals of the Stations Delivered by Fiber Optic Cable to the CTV Translator Towers





CTV's St. James tower is near the center of the group of 24 Communities. From that location, CTV's re-transmission of the programming of the Twin Cities Distant Stations covers the 24 Communities and more. The translators and their associated primary stations are identified in *Table 12*:

Table 12

Distant Stations and CTV Translators on which the Distant Stations' Programming is Re-transmitted

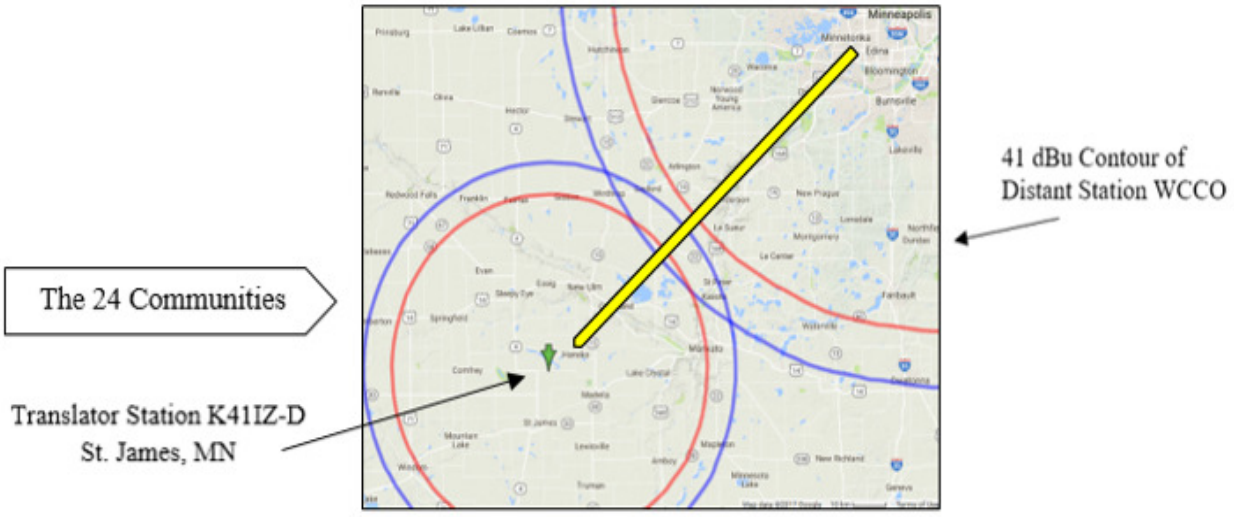
Minneapolis-St. Paul DMA	Fiber Optic Connection	Mankato DMA
Distant Stations in Minneapolis-St. Paul	97 miles	Translators on CTV's St. James Tower
WCCO		K41IZ-D
WFTC		K34JX-D
KMSP		K14KE-D

The artificial enlargement that the CTV Architecture accords the Twin Cities Distant Stations is illustrated in *Figures 8 – 10*.[76] In *Figure 8*, for example, consider WCCO-TV and the St. James translator K4IZ-D which re-transmits its signal. WCCO-TV's 41 dBu (noise-limited) contour (in blue) is marked by the arrow to the right of the map. The contour of Translator K41IZ-D is the blue circle to the left. The Godahl/St. James tower is marked by the green teardrop.

First, WCCO-TV's signal is transported 97 miles by optical fiber to the St. James tower. From that location, translator station K41IZ-D radiates WCCO-TV's programming in a circular sweep of approximately 45 miles. The 24 Communities are beyond the noise-limited contour of WCCO-TV but largely subsumed within the noise-limited contour of the St. James translator. It is only by means of the CTV Architecture that WCCO-TV's signal 'reaches' the 24 Communities.

Figure 8

Twin Cities Distant Station WCCO-TV
Extended by Optical Fiber Connection &
Enhanced by CTV Translator K41IZ–D, St. James



[76] *Figures 8 – 10* were generated using the query tool available at **http://rabbitears.info**.

The same phenomenon is depicted in *Figure 9* and *Figure 10*. The distant signals are transported by optical fiber to the St. James tower. The stations' programming is then broadcast throughout the area comprising the 24 Communities.

Figure 9

Twin Cities Distant Station WFTC
Extended by Optical Fiber Connection &
Enhanced by CTV Translator K34JX-D, St. James

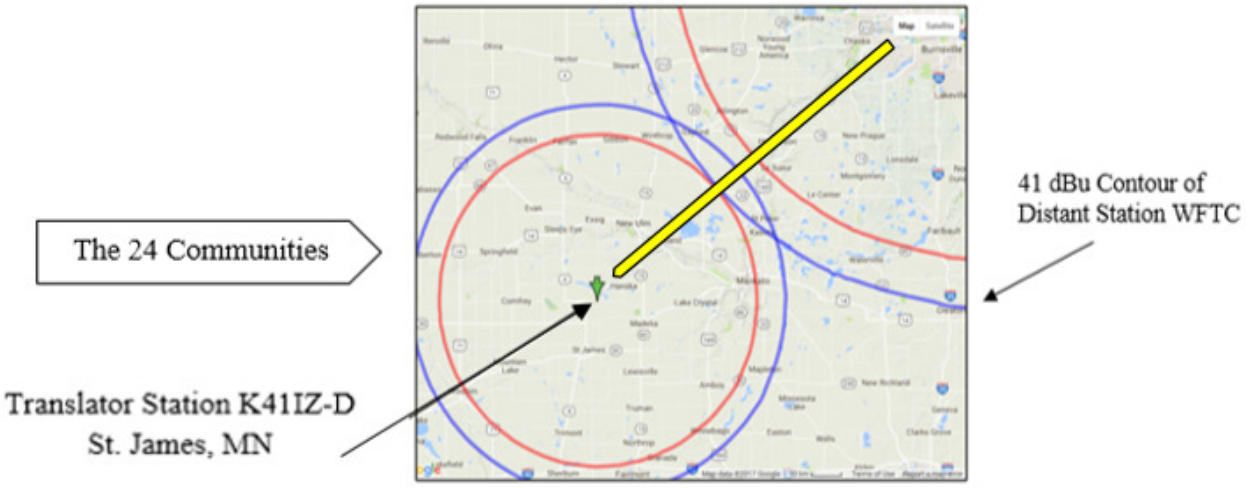
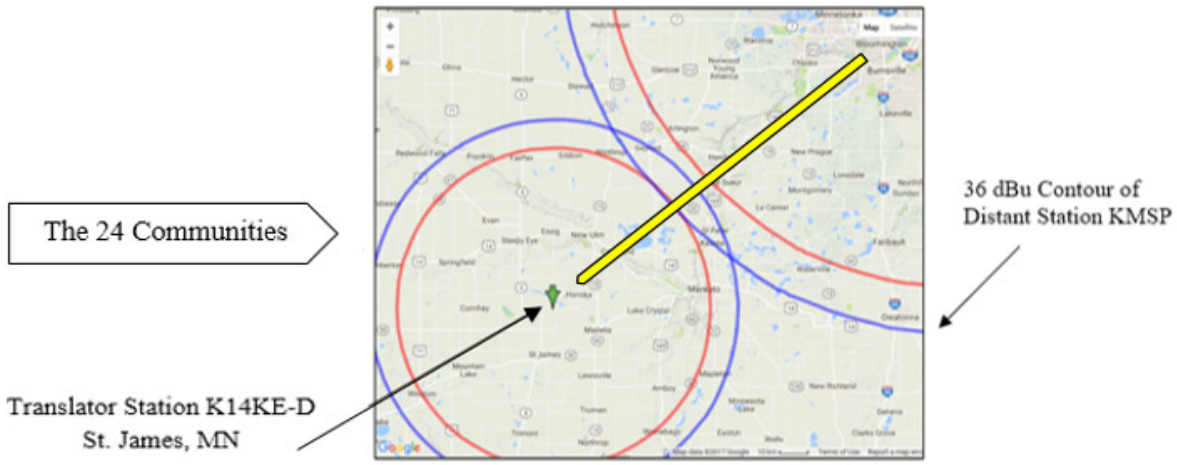


Figure 10

Twin Cities Distant Station KMSP-TV
Extended by Optical Fiber Connection &
Enhanced by CTV Translator K14KE-D, St. James



Figures 8 – 10 each illustrate the same phenomenon. The service areas of the Twin Cities Distant Stations are artificially and dramatically extended by the CTV Architecture.

2. <u>The CTV Effect: Enhanced 'Signals' of the Distant Stations.</u> The extraordinary difference the CTV Architecture makes is evident from the predicted signal levels of the translators at each of the 24 Communities, as shown below.

Table 14

Viewability of the **Translator** Stations
For Relevant Communities in **Blue Earth County**

Mankato DMA Blue Earth County			**Minneapolis-St. Paul DMA**			**Austin DMA**
Zip code	**Community**	**County**	**WCCO-TV via K41IZ-D**	**WFTC via K34JX-D**	**KMSP-TV via K14KE-D**	**KAAL[77]**
56001	Mankato	Blue Earth	-71.4 dBm 29.9 miles	-71.1 dBm 29.9 miles	-71.5 dBm 29.9 miles	
56010	Amboy	Blue Earth	-59.4 dBm 26.6 miles	-58.8 dBm 26.6 miles	-58.1 dBm 26.6 miles	
56034	Garden City	Blue Earth	-57.4 dBm 21.9 miles	-56.8 dBm 21.9 miles	-56.1 dBm 21.9 miles	
56024	Eagle Lake	Blue Earth	-70.1 dBm 35.7 miles	-69.8 dBm 35.7 miles	-69.9 dBm 35.7 miles	
56037	Good Thunder	Blue Earth	-60.6 dBm 27.3 miles	-60.6 dBm 27.3 miles	-61.8 dBm 27.3 miles	
56055	Lake Crystal	Blue Earth	-55.8 dBm 18.8 miles	-55.2 dBm 18.8 miles	-54.5 dBm 18.8 miles	
56063	Madison Lake	Blue Earth	-72.0 dBm 39.4 miles	-71.6 dBm 39.4 miles	-70.2 dBm 39.4 miles	
56065	Mapleton	Blue Earth	-62.6 dBm 34.2 miles	-62.4 dBm 34.2 miles	-63.2 dBm 34.2 miles	
56078	Pemberton	Blue Earth	-71.2 dBm 41.0 miles	-70.9 dBm 41.0 miles	-71.2 dBm 41.0 miles	
56080	St. Clair	Blue Earth	-70.7 dBm 36.8 miles	-70.4 dBm 36.8 miles	-70.6 dBm 36.8 miles	
56090	Vernon Center	Blue Earth	-58.0 dBm 23.5 miles	-57.4 dBm 23.5 miles	-56.7 dBm 23.5 miles	

[77] There is not a translator at the St. James tower that re–transmits the signal of KAAL (Austin, Minnesota). The red color of the KAAL column reflects what the data in the Viewability Tables show – i.e., that KAAL's signal is not viewable over-the-air in the Subject Communities.

Table 15
Viewability of the Translator Stations
For Relevant Communities in **Watonwan County**
(values are dBm)

Mankato DMA Watonwan County			**Minneapolis-St Paul DMA**			**Austin DMA**
Zip code	**Community**	**County**	**WCCO-TV via K41IZ-D**	**WFTC via K34JX-D**	**KMSP-TV[78] via K14KE-D**	**KAAL**
56022	Darfur	Watonwan	-51.9 dBm 12.7 miles	-51.4 dBm 12.7 miles		
56056	LaSalle	Watonwan	-38.7 dBm 2.8 miles	-38.1 dBm 2.8 miles		
56060	Lewisville	Watonwan	-53.6 dBm 15.1 miles	-53.0 dBm 15.1 miles		
56062	Madelia	Watonwan	-49.5 dBm 9.6 miles	-48.9 dBm 9.6 miles		
56081	St James	Watonwan	-48.6 dBm 8.8 miles	-48.0 dBm 8.8 miles		

The import of Figures 8 through 10 and of Tables 14 through 17 is that the CTV Architecture spreads the rebroadcast signals of the Twin Cities Distant Stations throughout KEYC-TV market in a fashion that – absent a grant of the relief requested in United's Petition -- utterly frustrates the FCC policies embodied in the significantly-viewed Exception.

[78] KMSP-TV is not classified as significantly viewed in Watonwan County.

Table 16
Viewability of the **Translator** Stations
For Relevant Communities in **Brown County**
(values are dBm)

Mankato DMA Brown County			**Minneapolis-St Paul DMA**			**Austin DMA**
Zip code	**Community**	**County**	**WCCO-TV via K41IZ-D**	**WFTC via K34JX-D**	**KMSP-TV via K14KE-D**	**KAAL**
56030	Essig	Brown	-53.6 dBm 15.0 miles	-53.0 dBm 15.0 miles	-52.2 dBm 15.0 miles	
56084	Searles	Brown	-51.2 dBm 11.6 miles	-50.6 dBm 11.6 miles	-49.9 dBm 11.6 miles	
56019	Comfrey	Brown	-53.8 dBm 15.4 miles	-53.2 dBm 15.4 miles	-52.5 dBm 15.4 miles	
56041	Hanska	Brown	-45.0 dBm 5.8 miles	-44.4 dBm 5.8 miles	-43.7 dBm 5.8 miles	
56085	Sleepy Eye	Brown	-53.4 dBm 14.7 miles	-52.8 dBm 14.7 miles	-52.1 dBm 14.7 miles	
56087	Springfield	Brown	-56.9 dBm 20.9 miles	-56.3 dBm 20.9 miles	-55.6 dBm 20.9 miles	
56073	New Ulm	Brown	68.1 dBm 15.9 miles	-67.2 dBm 15.9 miles	-65.4 dBm 15.9 miles	

Table 17
Viewability of the **Translator** Stations
For Relevant Communities in Nicollet **County**
(values are dBm)

Mankato DMA Nicollet County			**Minneapolis-St Paul DMA**			**Austin DMA**
Zip code	**Community**	**County**	**WCCO-TV via K41IZ-D**	**WFTC[79] via K34JX-D**	**KMSP-TV via K14KE-D**	**KAAL[80]**
56003	North Mankato	Nicollet	-60.0 dBm 28.3 miles		-58.7 dBm 28.3 miles	

[79] WFTC is not classified as significantly viewed in Nicollet County.

[80] KAAL is not classified as significantly viewed in Nicollet County.

The signal levels reflected in *Tables 14 – 17* show that the signals of the St. James translators are universally viewable in the Subject Communities.

3. The CTV Program Guide and Viewer Perceptions

In the CTV channel lineup (*Figure 11* below) the channels relating to the programs of the Distant Stations are denominated as the channels and call signs *of the Distant Stations.* The call signs and channel numbers of the translators do not appear. For example, the CTV channel guide displays Distant Station WCCO-TV and its virtual display channel 4.1, just as Minneapolis-area viewers would see it in a local Minneapolis channel guide and on their screens. In actuality, of course, CTV subscribers are viewing the signal of translator station K41IZ-D. But the seamless nature of the psip structure masks the underlying mechanics.[81]

Figure 11 [82]

Figure 12 [83]

CTV Translator Network Channel Lineup

Channels:

2.1 TPT - Twin Cities PBS affiliate
2.2 TPT MN (only on Godahl and Frost Towers)
2.3 TPT Life (only on Godahl and Frost Towers)
2.4 TPT Kids
2.5 TPT WX - Weather
4.1 WCCO 4 - Minneapolis CBS affiliate
5.1 KSTP - Minneapolis ABC affiliate
5.2 KSTC-TV - Independent
5.3 MeTV - Television Classics
5.4 Antenna TV - Television Classics
5.6 ThisTV - MGM Movies
5.7 H&I
9.1 KMSP - Minneapolis FOX affiliate
9.2 WFTC 29 - Minneapolis
9.3 Movies TV - Classic movies
9.4 Buzzer - Old game shows (Godahl Tower only)
9.9 KMSP (Godahl Tower only, same as 9.1)
11.4 KARE - Twin Cities NBC affiliate
11.5 KARE WX - 24-hour weather
11.6 Justice Network
12.4 KEYC - Mankato CBS affiliate
12.5 FOX - Mankato FOX affiliate
16.1 CTV: local access channel
16.2 Tuff TV: reality TV, sports and hunting
16.3 Heartland: Nashville Network
16.4 AMGTV: old movies
16.5 BizTV: small business shows and news
20.6 Vibrant TV
23.1 WUCW 23 - The CW Twin Cities
23.2 Comet
23.3 GRIT TV - Movies
23.4 GET TV
24.1 Rev'n: cars, boats, ATVss, etc.
24.6 CTV Two - Canadian channel (Godahl Tower only)
31.1 Retro TV: old shows
35.1 LAFF TV
40.1 YouToo: social network TV
41.1 ION TV - TV shows and movies
41.2 QUBO - Kids' programming
41.3 ION Life - Health and wellness shows
41.4 SHOP - Products for sale
41.5 QVC - Home Shopping
41.6 HSN - Home Shopping Network
45.1 Trinity Broadcasting: religious (Godahl Tower only)
45.2 Hillsong Channel - Australian religious (Godahl Tower only)
45.3 Smile of a Child: religious for kids (Godahl Tower only)
45.4 Juce TV: religious young adults (Godahl Tower only)
45.5 Enlace TV: Spanish channel (Godahl Tower only)
46.1 KDLT HD - Sioux Falls NBC (Jackson Tower only)
46.2 COZI TV - Classic TV (Jackson Tower only)

Nielsen Instructions for Recording Channel Information In TV Diaries

C. RECORDING YOUR CHANNEL INFORMATION

Station or Channel Name	Chan. No.
WAAA	7
KZZZ	82
KZZZ	82

Please write in the broadcast station or network the program is being watched on. For broadcast stations, please write the station's call letters, which usually consist of four letters that begin with W or K. If you don't know the call letters, refer to a newspaper or TV guide, or write the network the station is affiliated with. For a cable network, please write the name or an abbreviation of the name.

When making entries in the "Chan. No." column, please write in the channel number you enter on your TV to select the station. Draw a line down under the station name and channel number to indicate the length of time the channel was watched.

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[81] In the case of viewing digital television translators generally, the channel number of the translator station is only salient the first time a household receives a particular station's programming. Thereafter the translator channel and the primary station channel are associated in the digital receiver's operation and it is only necessary to know the channel number of the primary station to view the desired programming.

[82] *See* **http://www.ctv.coop/index.php?page=2.**

[83] *See* **http://tvdiary.nielsen.com/content/panel/tvdiary7-en-feb2014/home.html.**

This dynamic is likewise in play when a Nielsen household records its television viewing in a diary (*Figure 12* above). The diary instructions state: "When making entries in the [channel number] column, please write in the channel number you enter on your TV to select the station." CTV subscribers watching WCCO-TV programming would therefore enter "WCCO-TV" as "the broadcast station the program is being watched on." Households responding to the Nielsen surveys thereby register 'viewing' of the Distant Stations. It is this misleading record that is absorbed into the Nielsen statistics.

* * *

United began this Supplement by observing that the results of the Nielsen studies are anomalous. The Nielsen data indicate viewership of the Distant Stations in communities that are improbably far for direct reception of the distant signals actually to have occurred. Anomalies in data often signal the presence of exogenous variables, and such is the case here.

The distant signals are conveyed 97 miles from the Twin Cities to the CTV tower at St. James. From there, the programming of the Distant Stations is rebroadcast over the CTV translator network throughout the Subject Communities. The Nielsen statistics were not derived from local households' reception of over-the-air signals of the Distant Stations, but rather from the reception of the translator signals. Placing the Nielsen data in that context perfectly explains the anomalies in the Nielsen studies.

A fair exercise of the Waiver Procedure hinges on this dynamic. The CTV Architecture forecloses the possibility of obtaining evidence of the viewability of the Distant Stations by means of viewing surveys. We elaborate this critical fact in the following section.

4. Significance of the CTV Architecture with respect to United's implementation of the Waiver Procedure

United, in order to obtain a waiver of the Significantly Viewed Exception, must "follow[] the methodology set forth in Section 76.54(b)."[84] The reference class specified in Section 76.54(b) is "over-the-air television homes" – homes that receive television service via antennas that capture the radiated signals of distant stations.

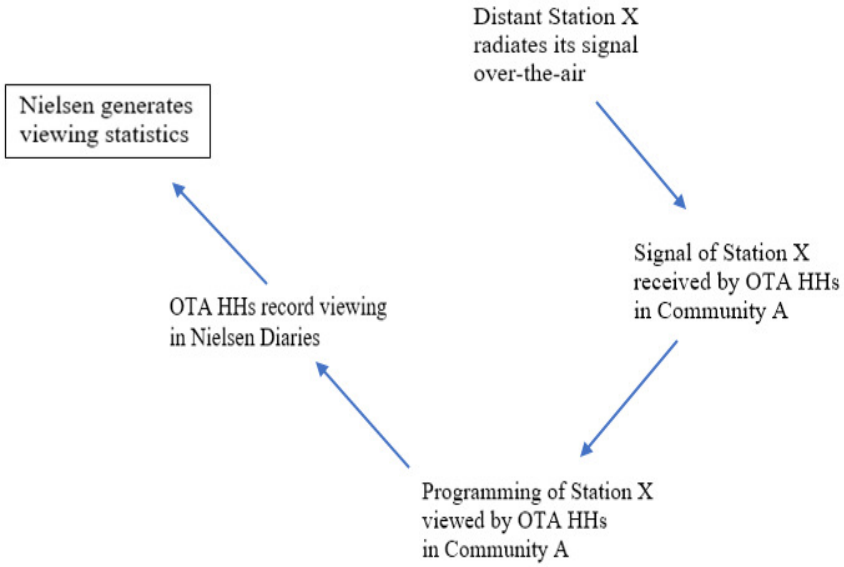
The Waiver Procedure can be relied on to produce relevant evidence because the variables described in the last paragraph are ordered and causally related: The radiated signal of the subject station is received over-the-air by antenna households, television reception makes viewership possible, viewership

[84] *WISN Hearst-Argyle Television, Inc.*, 26 FCC Rcd 4044, ¶3 (2011).

is recorded in Nielsen diaries, and this data is converted to statistics that are utilized in making significantly viewed determinations.

Figure 13 is a causal graph depicting the variables that underlie a typical Nielsen study:

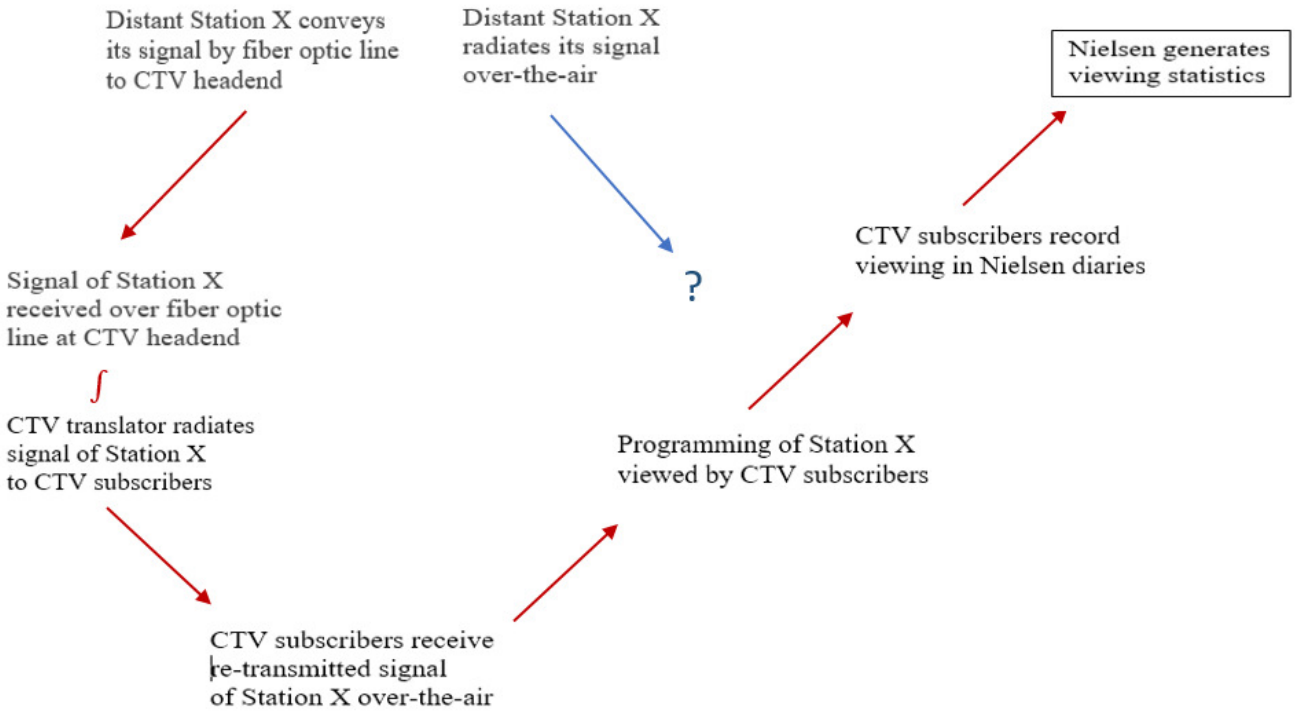
Figure 13



The beginning point is the station's over-the-air broadcast of its signal. The blue arrows show the causally related events from which the outcome – Nielsen's viewing statistics – materializes. The work of these particular variables ensures that the Nielsen study will accurately describe what it is supposed to describe – the empirical reality the Waiver Procedure is designed to assess. This causal structure enables the generation of relevant evidence because it accords with the elements constituting the Waiver Procedure.

In contrast, the causal graph shown in *Figure 14* depicts the instant case:

Figure 14



Signals of the translators are received 'over-the-air' – but this phenomenon is wholly *independent* of the technical reach of the Distant Stations. There *is no* causal relationship between the technical reach of the Distant Stations' signals and the reception of those signals by 'over-the-air television homes'. Nielsen statistics do emerge – but they are wholly *independent* of CTV households' viewing of the Distant Stations. Exactly the same Nielsen statistics would manifest if the Distant Stations' signals were not radiated at all and the fiber conveyance were the sole mode in which the signals were transmitted. The "over-the-air reality" that the Nielsen statistics ordinarily reveal is not illuminated.

Moreover, the effect of the occlusion caused by the CTV Architecture is that the Nielsen record generated is indistinguishable from a valid record. In *Figure 14* the form of the Nielsen studies that emerged is identical to the form the studies would have if they had resulted from the empirical conditions the Waiver Procedure presupposes (*Figure 13*). In *Figure 13* and *Figure 14,* the outputs – the generated statistics – are superficially identical. Nothing in the appearance of the Nielsen studies emerging under the *Figure 14* conditions is a tip-off that there is a problem. Suspicion that the studies might not reveal the full picture arises only against the backdrop of the unusual propagation distances

noted earlier. That anomaly signaled the need to look for an explanation, which this Supplement provides.

It is important to emphasize that the problem is *not* the Commission's Waiver Procedure. Nor is the problem the Waiver Procedure as it is operationalized by the Nielsen methodology. The problem is that the CTV Architecture forecloses the possibility of obtaining evidence of the viewability of the Distant Stations by means of audience surveys. Nielsen studies ordinarily yield this evidence straightforwardly: If a station's signal is not viewable in a community, the station cannot be 'viewed' in that community – 'significantly' or otherwise. In such a case the Nielsen statistics will indicate *ceteris paribus* that the station garners no viewership (zero share and zero cume).

Here, however, the viewability inference ordinarily available in a Nielsen statistic is eclipsed by the CTV Architecture.[85] Absent our illuminating what the CTV Architecture masks, the Waiver Procedure is undermined. It therefore became necessary to examine the signal strengths of the Distant Stations explicitly.[86] The Commission's highly accurate signal propagation models are available to generate the relevant evidence.[87]

5. Specific Legal Issues Relating to Translator Viewership in this Context

Households in the 24 Communities 'receive' the Twin Cities Distant Stations *via* translator signals. Over the years the ongoing significantly viewed status of the Distant Stations has rested on this fact.

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[85] Of course, the very existence of the CTV network is indirect evidence on this score. "Digital TV translator stations provide a means whereby the signals of DTV broadcast stations may be retransmitted to areas in which direct reception of such DTV stations is unsatisfactory due to distance or intervening terrain barriers." 47 C.F.R. §74.790(a). A logical explanation for the presence of the translators is that the distant signals of the primary stations are not directly viewable in the vast area of CTV's operations. *See Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming* (MM Docket No. 14-16), FCC 15-41, April 2, 2015, at n. 554 ("Television translator stations typically serve communities that cannot receive the signals of free over-the-air television stations because they are too far away from a full-power television station or because of geographic limitations").

[86] 'Signal strength' is the measurement the FCC identifies as the key indicator of television service at particular locations and upon which the Commission relies in a variety of contexts in making judgments concerning television reception. *See* **47 C.F.R. §73.683** *et seq.*

[87] The Commission itself confronted this methodological challenge in the *2016 Report to Congress*: "Given that Nielsen aggregates viewership information for purposes of the market data we examined, we are *unable to determine precisely by what means such out-of-market signals are being viewed or distributed in the particular market.*" *Id*. at ¶59. The viewability analysis the FCC delivered to Congress included predicted service data, Nielsen data, and case studies of several specific markets. *Id.* at ¶60. We have followed this pattern.

That this should be the empirical underpinning of the Distant Stations' status is problematic for several interrelated reasons.

(a) Translator-enabled Viewership. Viewing data from translator audience is not permitted under Section 76.54(b) analyses. In *Scranton Broadcasters, Inc*.[88] a television station sought to base significantly viewed status on statistics that included the station's translator audience. The Commission rejected this approach. To stitch together the fabric of a significantly viewed showing from a distant station's over-the-air signal and the over-the-air signal of a translator would create "a distorted result."[89] The rights of full-power stations are very different from those of translators, and they are sourced in different policy rationales. Combining them in order to produce a viewing level that is 'significant' would be an artificial manipulation of the different rights that each type of station holds, thereby "creating a hybrid station with mandatory carriage rights not contemplated by the Commission's Rules."[90] Similarly, in the instant case, the CTV Architecture as an enabler of the Distant Stations' significantly viewed status produces an improper 'hybrid' configuration.

The reason this is a problem in the context of a request for waiver of the Significantly Viewed Exception is that it permits a distant station's 'legacy' status to rest on a kind of circular logic that guarantees its continuation. Viewership is garnered only because the distant signal is augmented by the translators. It does not flow from the empirical reality of the distant station's viewability, but from a gimmick 'built in' to create that condition..[91]

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[88] *Scranton Broadcasters, Inc*., 88 FCC 2d 1482 (1982).

[89] *Id*. at ¶13.

[90] *Id*. at ¶11. *Also see KOIN-TV, Inc.,* 93 FCC 2d 186, ¶ 5 (1983)("The parties in this proceeding acknowledge that their viewing data includes translator viewing data. In analyzing viewing data submitted pursuant to Section 76.54 of the Rules, translator viewing statistics are not normally to be combined with the audience viewing statistics of the originating station"); *Taft Television and Radio Co., Inc*., 103 FCC 2d 883, ¶7 (1986) ("The audience viewing data submitted by WCIX cannot be relied upon to determine the station's significantly viewed status. The data impermissibly commingles viewing data from WCIX with viewing data from W33AA, a local translator station, and it is settled that determinations of significantly viewed status cannot be based upon such commingled data").

[91] This principle applies in other Part 76 contexts as well. *See, e.g., Comcast Cable Communications, LLC*, 30 FCC Rcd 2048 (2015) to this end ("We find that WFXU, located an average of more than 82 miles from the Communities, does not provide service coverage of 41 dBu over the Communities. Budd cannot establish a local presence to satisfy the coverage prong of the market modification test by relying on the fact that WUFX-LD, a low power digital television station, receives and rebroadcasts content from WFXU. . . . The Longley-Rice study submitted by Budd, based on coverage from low power station WUFX-LD, is not an acceptable submission and cannot be relied upon as an indication of

(b) The Logic of Section 76.54(b). In Section 76.54(b), 'over-the-air television homes' refers to antenna households viewing the signals of full-power television stations. Significantly viewed status attaches only to full-power facilities.[92] It would be nonsensical if Section 76.54(b) – designed to reveal when a station is or is not significantly viewed – permitted over-the-air viewing studies of stations that cannot have significantly viewed status. In the instant case, CTV's subscribers are viewing the signals of translator stations – a category of stations to which significantly viewed status cannot attach.

(c) The Optical Fiber Conduit. The fact that the signals of the Distant Stations are conveyed by fiber lines to the CTV headend violates the "over-the-air television homes" requirement of 76.54(b). The signals cannot be considered received 'over-the-air' by households in the 24 Communities if the first 97 miles of the journey is the conveyance of the signals from the Twin Cities to the CTV headend by fiber optic lines.

(d) Constraints in Section 74.790(b). It is not the purpose of television translators to expand the service areas of primary television stations beyond their designated markets.[93] The Part 74 rule governing permissible operation of translators incorporates this logic.

Section **74.790(b)** states:

> Except as provided in paragraph (f) of this section, a digital TV translator station may be used *only to receive the signals* of a TV broadcast or DTV broadcast station, another digital TV translator station, a TV translator relay station, a television intercity relay station, a television STL station, or other suitable sources such as a CARS or common carrier microwave station, for the simultaneous retransmission of the programs and signals of a TV or DTV broadcast station. Such retransmissions may be accomplished by any of the following means:
>
> (1) **Reception of** TV broadcast or DTV broadcast station programs and **signals directly through space** and conversion to a different channel by one of the following transmission modes:

WFXU's coverage area. . . [T]ranslator stations do not . . . provide evidence that the cable communities are within a station's natural market"); *Dynamic Cablevision of Florida Ltd.,* 12 FCC Rcd 9952, ¶13 (1997) ("Commercial translators are secondary service stations that are explicitly not entitled to carriage in their own right and the service provided by [the station's] translators here are of limited significance in the market modification analysis. On balance, the translators here appear not to be a reflection of the underlying market area of [the station], filling in gaps in the station's service area, but an extension of it").

[92] Translators rebroadcasting the signals of commercial television stations have no right to mandatory carriage (*see* **47 C.F.R. §76.55(c)**) and are not included on the Commission's list of 'significantly viewed' stations.

[93] *See* n. 96 and n. 97.

(i) Heterodyne frequency conversion and suitable amplification, subject to a digital output power limit of 30 watts for transmitters operating on channels 14-69 and 3 watts for transmitters operating on channels 2-13; or
(ii) Digital signal regeneration (i.e., DTV signal demodulation, decoding, error processing, encoding, remodulation, and frequency up-conversion) and suitable amplification; **or**,

(2) Demodulation, remodulation and amplification of TV broadcast or DTV broadcast station programs and signals received **through a microwave transport**.

The constraints in Section 74.790(b) are important. Reception by television translators of the signals of a primary station may be accomplished in two ways. The first is propagation "directly through space" from the primary station to the translator. The second is propagation mediated by a "microwave transport." The "digital signal regeneration" allowed under Paragraph (1)(ii) expressly specifies manipulation of a signal radiated "directly through space. Conveyance of the signal via optical fiber is not authorized. Transmissions of signals through space directly or mediated by microwave stations are inherently limited in a way that fiber transmissions are not. CTV relies upon the fiber optic conveyance precisely to take advantage of that distinction.

(e) The Distant Stations' Non-parentage of the Translators is Irrelevant. The fact that the Twin Cities Distant Stations are not the owners of the translators does not legitimize their reliance on the translators to create viewability of the distant signals. The CTV Network is not a serendipitous externality exploitable by the Twin Cities Distant Stations to perpetuate their significantly viewed status. The CTV Architecture is extant in the environment *because* the signals of the Distant Stations are *not* viewable over-the-air; and it is only through the CTV Architecture that the programming of the stations is available at all to CTV subscribers. Moreover, the Twin Cities Distant Stations affirmatively authorize CTV to retransmit their signals and CTV affirmatively seeks such authority. Both sides benefit from perpetuating a fiction. Both are incented to maintain the impression the Nielsen studies unwittingly create.

* * *

Undertaking the viewability analysis presented in this Supplement is necessary to reveal the "the over-the-air realities of [the] situation."[94]

[94] *Network Program Exclusivity Protection by Cable Television Systems*, 68 FCC 2d 1461, ¶19 (1978).

III. EVALUATING THE VIEWABILITY EVIDENCE

The CTV Architecture has the confounding effect we have described. This required that signal strength data be assessed directly. The *Viewability Tables* and other materials in this Supplement facilitate this. The viewability evidence is reviewed below.

A. Distant Stations that are Ostensibly Viewable. The Distant Stations are not viewable over-the-air in most of the 89 Cases. There is a small subset of cases where, according to the values generated by the DTV Reception Tool, the signals of the Distant Stations might be marginally viewable. As to these cases, the viewability predicate of significantly viewed status is not as clearly invalid as it is elsewhere. (Whether a Distant Station's significantly viewed status has lapsed because the viewership level is too low is a different question, which we address in Section IV, *infra*.)

As explained earlier, under the FCC's digital television standards for viewability, the minimum signal level required at the input terminal of a television receiver is -84.0 dBm for UHF channels, while it is -81.0 dBm for low and high VHF channels. WCCO-TV, WFTC and KAAL are UHF facilities. KMSP-TV is a VHF station.[95] Under the Commission's DTV Reception Tool classifications, signal levels worse than -86 dBm generally are classified as 'No Signal' (red). Signal levels between -79 dBm and -86 dBm are classified as 'Weak' (brown). Stronger signal levels are classified as 'Strong' (green) and 'Moderate' (yellow).

The *Viewability Tables* reflect *zero* out of 89 cases in which the DTV Reception Tool predicts a 'Strong' or 'Moderate' signal. There are six cases (from *Table 3* and *Table 6*) in which a 'Weak' signal level is predicted. These are shown in *Table 18*:

Table 18

Cases in which the Commission's DTV Reception Tool
Predicts Signal Levels Indicative of Viewability of a Distant Station

Distant Station	County	Community	Signal Level
WCCO-TV	Blue Earth	Eagle Lake	-86 dBm 72.2 miles

[95] WCCO-TV (RF Ch 32 - UHF, Virtual Ch 4 - PSIP); WFTC (RF Ch 29 - UHF, Virtual Ch 9 - PSIP); KMSP-TV (RF Ch 9, Virtual Ch 9); KAAL (RF Ch 36 - UHF, Virtual Ch 6 - PSIP). WFTC and KMSP-TV are sister stations.

WCCO-TV	Blue Earth	Madison Lake	-79 dBm 67.9 miles
WFTC	Blue Earth	Madison Lake	-81 dBm 68.1 miles
KMSP-TV	Blue Earth	Madison Lake	-84 dBm 68.1 miles
WCCO-TV	Nicollet	North Mankato[96]	-83 dBm 75.2 miles
KMSP-TV	Nicollet	North Mankato	-84 dBm 75.5 miles

If it is assumed that a signal characterized by the Commission's DTV Reception Tool as 'weak' is a technically viewable signal, the six cases specified in *Table 18* would be provisional instances of viewable signals.

However, in order to make a well grounded judgment as to whether viewability explains the Nielsen data in a given case, it is also necessary to consider the magnitude of the effect of the associated translators on viewing quality. If the signal quality available to viewers is significantly greater under the assumption of translator viewing, it is reasonable to conclude that the viewership registered in the Nielsen diaries is a function of translator viewing. In other words, although the predicted signal strength of a station might fall into the category of minimally viewable ('weak'), it would be more logical to conclude that the superior-quality translator signal had been viewed and it was this viewing behavior that was reflected in the Nielsen diary. *Table 19* presents these additional data.

Table 19

Quality of Distant Signals
Compared to Quality of Translator Signals

Distant Station	County	Community	Signal Level	Translator
WCCO-TV	Blue Earth	Eagle Lake	-86 dBm	-70.1 dBm 35.7 miles
WCCO-TV	Blue Earth	Madison Lake	-79 dBm	-72.0 dBm 39.4 miles
WFTC	Blue Earth	Madison Lake	-81 dBm	-71.6 dBm 39.4 miles
KMSP-TV	Blue Earth	Madison Lake	-84 dBm	-70.2 dBm 39.4 miles
WCCO-TV	Nicollet	North Mankato	-83 dBm	-60.0 dBm 28.3 miles

[96] As noted above, while the signals of WCCO-TV and KMSP-TV are not viewable at the KEYC-TV studio in North Mankato, the CTV translators deliver excellent off-air signals to that location. The studio is located very close to the highest elevation in North Mankato, and therefore optimally situated to receive the Twin Cities Distant Stations' off-air signals, were they actually available.

KMSP-TV	Nicollet	North Mankato	-84 dBm	-58.7 dBm 28.3 miles

Here the notable information is that the signal strength advantage conferred by the translator for WCCO-TV at Eagle Lake (-70.1 dBm compared to -86 dBm) is significantly greater than the advantage conferred by the translator for WCCO-TV at Madison Lake (-72 dBm compared to -79 dBm). This would suggest that viewing of WCCO-TV recorded with respect to Eagle Lake is most probably the result of translator viewing and thus that WCCO-TV/Eagle Lake should be removed from the table.

B. Twin Cities Distant Stations that are Not Viewable. Regarding the remaining cases, the evidence presented herein is more than sufficient for the Commission to decide that the signals of the Distant Stations are not viewable in the Subject Communities, and therefore that the stations cannot hold significantly viewed status in those communities. Here, the viewability evidence is reliable for the following reasons:

i. The *Viewability Tables* were generated by the Commission's DTV Reception Tool. Underlying the tool is a computer program that executes the terrain-sensitive Longley-Rice propagation model. The quality of the Longley-Rice family of propagation models has been repeatedly confirmed. Moreover, the correlations of signal strength and viewability that are the outputs of the DTV Reception Tool are codified in the FCC's Rules defining the conditions of television service and coverage. The predictive accuracy of the model is about 95 percent.[97]

ii. The *Viewability Tables* are consistent with the FCC's findings in the *2016 Report to Congress*.

iii. The data in the *Viewability Tables* are consistent with the calculations generated by the Signal Analysis Tool, as shown in **Exhibit 2**.

iv. The results in the *Viewability Tables* are consistent with the propagation distances involved and explain the distance anomalies with which we began.

v. The CTV translator network is a phenomenon we would expect to see if the signals of the Distant Stations were not viewable over-the-air. Similarly, the 97-mile optical fiber conduit is a phenomenon we would expect to see if that mechanism were needed for the translators to radiate Twin Cities signals of sufficient quality. CTV's own characterization confirms this explanation. According to CTV, the fiber lines ensure that "no signal degradation" of the distant signals occurs and that when the signals are re-transmitted from the CTV towers

[97] *See, e.g.*, *Report to Congress, The Satellite Home Viewer Extension and Reauthorization Act of 2004, Study of Digital Field Strength Standards and Testing procedures*, ET Docket No. 05–182, released December 9, 2005, ¶37.

throughout KEYC's market area they are "of the same quality as broadcasted in the Twin Cities."[98]

These factors are sufficiently varied that the influence of each causes yet a further reduction in the likelihood that the Distant Stations (excepting the cases noted in *Table 19*) are viewable over-the-air in the Subject Communities. Their summed effect is to reduce that possibility to such an extent that it would be irrational to believe otherwise.

(c) KAAL is Not Viewable. As we have explained, the Nielsen studies relating to KAAL – unlike the Nielsen studies for the Twin Cities Distant Stations – convey genuine evidence as to KAAL's viewability. The Viewability Tables indicate that KAAL's signal is not strong enough to be viewed in the Subject Communities. The Nielsen studies confirm this. With respect to those cases in which Nielsen diaries were returned, zero viewership is reflected. This is to be expected: A station cannot register viewership in a community if its signal is not viewable there.

The Nielsen records for KAAL are presented in **Exhibit 6**. A cursory scan of Exhibit 6 shows a vast scene of zero viewership, just as we should expect given that KAAL's signal is not viewable in the Subject Communities.[99] In **Exhibit 4** we have indicated the cases in which the Nielsen studies dissolve KAAL's significantly viewed status. Not all of the communities are affected because there were cases in which a sufficient consistency of returned diaries was missing. In the Revised Significantly Viewed List presented below, we provisionally include KAAL in all communities because the viewability data so compellingly confirm that the station's signal is universally unviewable over-the-air.

IV. ANNOTATIONS TO THE SIGNIFICANTLY VIEWED LIST

The *Viewability Tables* indicate the cases in which the Distant Stations are not viewable over the air in the 24 Communities. The Nielsen studies evaluated in the Petition for Special Relief identified cases in which viewership of the Distant Stations is not 'significant.'

A. *The Continued Validity of Nielsen Statistics Indicating a Lapse of 'Significant' Viewing Levels*

If either of the empirical premises underlying the Significantly Viewed Exception is missing, the SV Exception cannot be sustained: If the signal of the distant station is not actually viewable over-the-air in the cable community, the station cannot maintain significantly viewed status. Further, if a signal is

[98] *See* **http://ctv.coop/index.php?page=8**.

[99] The sole exception is Lake Crystal. In that case the share is .57 but the share standard error is .69. The cume is 25.0 but the cume standard error is 0.0. KAAL is 90.3 miles from Lake Crystal. The predicted signal strength is so weak that it does not appear in the Commission's DTV Reception Tool. The Signal Analysis Tool predicts a dBm of -103.7 – a manifestly unviewable signal. From these data it can only be concluded that the Nielsen statistic resulted from a reporting error.

viewable in the cable community, but the signal is not 'significantly' viewed there, the station cannot maintain significantly viewed status.

With respect to the *viewability* of the distant signals, we have explained that the inferences ordinarily available from Nielsen statistics are not available here. They are precluded by the CTV Architecture. Explicit consideration of signal strength is thus required. This was presented in the *Viewability Tables*.

With respect to the *viewership* of the Distant Stations, the Nielsen studies relating to the Twin Cities Distant Stations are *not* compromised. Such data cannot reasonably be relied on to *sustain* the stations' significantly viewed status because that status is contingent on the stations' signals being viewable over-the-air in the first instance. But the Nielsen data *can* be relied on as evidence that a station's viewing level is no longer 'significant.' *That* measurement is independent of the underlying viewability of the signal. Thus the existence of the CTV Architecture does not 'poison' the Nielsen studies for all purposes.

The Nielsen studies indicating a lapse of 'significant' viewing levels are shown in red in *Tables 8 – 11*. The viewability data generated by the Commission's DTV Reception Tool are shown in *Tables 3 – 6*. The two sets of results are consolidated in **Exhibit 4**. From these, the necessary annotations to the Significantly Viewed List can be stated. In the proposed revised portion of the List below, the hash mark "#" indicates that a particular Distant Station is not entitled to protection from deletion of programming that duplicates programming of a local station.

B. ***Annotations***

Stations Subject to Programming Deletions by Operation of the FCC's Network Non–duplication and Program Exclusivity Rules

MINNESOTA

BLUE EARTH COUNTY
Mankato – #WCCO-TV, WFTC, KMSP-TV, KAAL
Amboy – #WCCO-TV, WFTC, KMSP-TV, KAAL
Garden City – #WCCO-TV, WFTC, KMSP-TV, KAAL
Eagle Lake – #WCCO-TV, WFTC, KMSP-TV, KAAL
Good Thunder – #WCCO-TV, WFTC, KMSP-TV, KAAL
Lake Crystal – #WCCO-TV, WFTC, KMSP-TV, KAAL
Madison Lake – #KAAL
Mapleton – #WCCO-TV, WFTC, KMSP-TV, KAAL
Pemberton – #WCCO-TV, WFTC, KMSP-TV
St Clair – #WCCO-TV, WFTC, KMSP-TV, KAAL
Vernon Center – #WCCO-TV, WFTC, KMSP-TV, KAAL

WATONWAN COUNTY[100]
Darfur – #WCCO-TV, WFTC, KAAL
LaSalle – #WCCO-TV, WFTC, KAAL
Lewisville – #WCCO-TV, WFTC, KAAL
Madelia – #WCCO-TV, WFTC, KAAL
St. James – #WCCO-TV, WFTC, KAAL

BROWN COUNTY
Essig – #WCCO-TV, WFTC, KMSP-TV, KAAL
Searles – #WCCO-TV, WFTC, KMSP-TV, KAAL
Comfrey – #WCCO-TV, WFTC, KMSP-TV, KAAL
Hanska – #WCCO-TV, WFTC, KMSP-TV, KAAL
Sleepy Eye – #WCCO-TV, WFTC, KMSP-TV, KAAL
Springfield – #WCCO-TV, WFTC, KMSP-TV, KAAL
New Ulm – #WCCO-TV, WFTC, KMSP-TV, KAAL

NICOLLET COUNTY[101]
North Mankato – #WCCO-TV, KMSP-TV

V. WAIVER ANALYSIS

The Significantly Viewed Exception rests on two factual premises: (A) The signal of a qualifying station is viewable over-the-air in the relevant cable community and (B) the viewership that results from he signal's availability is 'significant.' If either of these premises is false, significantly viewed status cannot properly obtain or persist. The strong virtue of the Commission's procedure for waiving the Significantly Viewed Exception is that a petitioner's executing the waiver methodology ordinarily reveals the "over-the-air realities" of the matter.[102] However, with respect to the viewability premise the

[100] KMSP-TV is not significantly viewed in Watonwan County.

[101] WFTC and KAAL are not significantly viewed in Nicollet County.

[102] This objective was the motivation for the Commission's applying the Significantly Viewed Exception to non-duplication protection cases in the first place. Until 1978, a distant station's immunity from deletion was based not on a showing that the station was significantly viewed but on the relative distances between the local and distant station, and the cable community. (The significantly viewed concept had theretofore been applied only to carriage issues.) Over time it became apparent that there were cases in which a distant station's signal might unexpectedly be viewable over-the-air in a community, yet the distant station's programming was subject to deletion based on the relative-distance test. This was ill-advised, said the Commission, because it did not "reflect the over-the-air realities of [the] situation." *Network Program Exclusivity Protection by Cable Television Systems*, 68 FCC 2d 1461, ¶19 (1978). Specifically problematic was that the "**viewability factor**" was not considered. *Network Program Exclusivity Protection by Cable Television Systems Petitions for Reconsideration*, 67 FCC 2d 1303, ¶1 (1978) (emphasis added). The rules were changed in 1978 to provide that "a station which is *significantly viewed* under Section 76.54 not be deleted." *Id*. at ¶9 (emphasis added).

CTV translator context distorts the viewability inferences which Nielsen statistics typically offer. Because signal strength is the Commission's designated metric for evaluating viewability, United presented signal strength data. This enabled the truth-revealing function of the Waiver Procedure to be preserved.

The viewability data are more than enough evidence to warrant the grant of United's Petition for Special Relief. But there are yet further grounds.

Uniqueness. In this Supplement, we have recurrently cited the Commission's affirmation of the general accuracy of the Significantly Viewed List: "We do not believe [that] there is any serious dispute that, with very few exceptions, the signals in question are available over-the-air to individuals with rooftop antennas." The present case is one of those exceptions; in most of the Subject Communities the signals of the Distant Stations are not viewable. Although Nielsen studies ordinarily would confirm this fact, the possibility of the emergence of that evidence with respect to the Twin Cities Distant Stations is precluded because of the confounding effect of the CTV Architecture. Working around that obstacle requires viewability evidence in the form of signal strength.

How unusual is it that a local television station wishing to obtain a waiver of the Significantly Viewed Exception would find itself in KEYC-TV's position? We consider this below.

In the *2016 Report to Congress*, discussed *supra*, the Commission evaluated *inter alia* the extent to which consumers have access to out-of-market television signals received over the air. As an aspect of that analysis, the FCC looked at Nielsen data to determine whether Nielsen (for the period November 2015) had recorded viewership of out-of-market signals in a market other than the distant station's home market. Appendix C of the *2016 Report to Congress*, "Viewership of Out-of-Market Signals Based on Nielsen Market Data," presents this information.

In all, 79 stations appeared in the Nielsen data as having been viewed outside their assigned market.[103] The Commission next examined whether any of those stations were classified as significantly viewed in any of the counties of the DMA in which Nielsen had recorded viewing of out-of-market stations. Using the Significantly Viewed List, the FCC "matched significantly viewed counties with the DMAs to which they are assigned by Nielsen, and cross-referenced to isolate instances where a station appeared as significantly viewed in a county that is part of the distant (non-home) market in which the station is reported by Nielsen to have garnered ratings."[104] There are 51 such cases.

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[103] *2016 Report to Congress*, ¶ 60. The reporting period was November 2015.

[104] *Id*. at Note 1, Appendix C.

Working from this baseline data, it is possible to quantify the extent to which the defining facts of the instant case could reappear in other cases. By 'defining facts' we mean the conditions required to spawn a predicament of the type KEYC-TV confronts here, where the issue of viewability can *only* be resolved by the use of signal strength data. **Exhibit 5** offers that analysis. We show that there are only three instances nationwide (including KEYC-TV) in which a local network affiliate seeking to enforce its program exclusivity rights would be blocked by the dynamics that have blocked KEYC-TV.

Equities and Rule Integrity. The 'integrity' of a rule is the property that ensures the rule is not applied to circumstances in which the predicate for its creation does not exist.[105] Waiver is the mechanism that allows an agency to preserve the integrity of a rule in such circumstances. "This combination of a general rule and limitations is the very stuff of the rule of law"[106] because cases inevitably arise when the mechanical application of a rule is not only unreasonable, but *wrong*. The harm of inequity enlarges as the ability of an affected party to gain relief is more constrained or becomes more futile. It is one thing if the predicate for the rule – the empirical state of affairs that was the logic for the rule's creation – no longer exists, but there is recourse. A more acute inequity would be the continued application of the rule *as if* the predicate existed – that is, the continued administration of the rule upon a fiction. Even more egregious would be a case in which the *futility* of a waiver petition were a foregone conclusion.

It is this third-degree inequity that threatens United. Every year – literally for decades – United has paid the substantial fees that syndicators require in exchange for exclusivity. And yet every year United is precluded from exercising its exclusivity rights because the Distant Stations are classified as significantly viewed in communities where their signals are not viewable.

The Commission's Waiver Procedure is well designed and reliable. Nielsen's methodology ordinarily yields exactly the type of evidence that the fair resolution of significant viewing cases requires. Here, however, that objective is virtually futile because the CTV Architecture – the bounded setting for Nielsen's surveys in these unique circumstances – eliminates the conditions under which such evidence could arise. Consideration of signal strength evidence is therefore necessary. Only by that route is the significantly viewed status of the Distant Stations resolvable.

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[105] *See, e.g., Geller v FCC*, 610 F 2d 1973 (D.C. Cir 1979 ("Even a statute depending for its validity upon a premise extant at the time of enactment may become invalid if subsequently that predicate disappears").

[106] *WAIT Radio v. FCC*, 418 F.2d 1153; 16 Rad. Reg. 2d 2107, 2115 (DC Cir. 1969).

Finally, it is important to recognize that the necessity of considering signal strength data followed from United's *affirmatively executing the Waiver Procedure*. Because of the confounding influence of the CTV Architecture, the use of signal strength data is the *only* way to effect the Waiver Procedure's design. United is *not* asking for a waiver of Section 76.54. Instead of asking for a 'waiver' of the Waiver Procedure, it seeks to benefit from the Waiver Procedure in the way the FCC intended.[107]

VI. CONCLUSION

A television station cannot be 'significantly' viewed in a cable community if its signal is not 'viewable' over-the-air in that community. United has shown that practically all of the 89 Cases, the Viewability requirement is not met, and even in some instances even where it might otherwise be thought to be marginally satisfied such as North Mankato, the signals of the CTV translators are stronger and must account for any viewing of the Twin Cities Distant Stations reported by Nielsen. Therefore, 'significantly viewed' status cannot apply in those cases, but only where the direct signals of the Distant Stations are stronger than those of the CTV translators.

KEYC-TV, a family-owned station, has been an exemplary steward of the public interest for more than 57 years. I t is difficult to imagine a television licensee who more faithfully embodies the ideals of Localism. Yet, for most of its history KEYC-TV has been precluded from enforcing the program exclusivity rights it pays for and which are crucial to the most robust realization of its purpose.

Here, the 'lapse' in significantly viewed status is not a recent development. It is not a result of changing demographics or other events that ordinarily can trigger a re-evaluation of a distant station's significantly viewed classification. In this case, as we have explained, the out-of-market stations *never* were viewable over-the-air in most of the communities in question. Indeed, but for the power of the Commission's Waiver Procedure to reveal the 'over-the-air realities' of the matter, KEYC-TV would have no practical recourse to overcome the distortions perpetrated in its market by the erroneous, or at the very least outmoded, presence of the Distant Stations on the significantly-viewed list in the counties that comprise the Mankato DMA.

[107] The distinction becomes crystal clear next to cases where the petitioner *did* request a waiver of the Waiver Procedure. *See, e.g., Taft Television and Radio Company, Inc*., 103 FCC 2d 883, ¶2 (1986); *KSTC-TV, LLC*, CSR-7175-S (DA 10-1151), rel June 24, 2010.

For these reasons, United urges the Commission to grant the Petition for Special Relief as supplemented here, consistent with the Annotations to the Significantly Viewed List set forth herein.

Respectfully submitted,

UNITED COMMUNICATIONS CORPORATION

By: __*s/Barry D. Wood*_____
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August11, 2017

DECLARATION of MARVIN D. RHODES

I, Marvin D. Rhodes, am the General Manager of television broadcast station KEYC-TV, Mankato, Minnesota, licensed to United Communications Corporation.

I hereby declare under penalty of perjury under the laws of the United States that the statements of fact set forth in the foregoing Petition for Special Relief are true and correct to the best of my personal knowledge.

Dated August 11, 2017.

_____s/ Marvin D. Rhodes_____
Marvin D. Rhodes

Exhibit 1

Radio Horizons of the Distant Stations

Distant Station	≈ 1.41√ HAMSL	Radio Horizon
WCCO-TV	1.41√ 2332	68.3 miles
WFTC	1.41√ 2194	66.2 miles
KMSP-TV	1.41√ 2339	68.4 miles
KAAL	1.41√ 2427	69.6 miles

Exhibit 2
Viewability Data Generated with Signal Analysis Tool

Viewability of the Distant Stations
For Subject Communities in Blue Earth County

Mankato DMA Blue Earth County			Minneapolis-St. Paul DMA			Austin DMA
Zip code	**Community**	**County**	**WCCO-TV**	**WFTC**	**KMSP-TV**	**KAAL**
56001	Mankato	Blue Earth	-109.1 dBm	-111.5 dBm	-109.4 dBm	> dBm
56010	Amboy	Blue Earth	-102.7 dBm	> dBm	> dBm	101.1 dBm
56034	Garden City	Blue Earth	-101.9 dBm	-103.4 dBm	-102.2 dBm	> dBm
56024	Eagle Lake	Blue Earth	-84.5 dBm	-87.3 dBm	-87.8 dBm	-95.5 dBm
56037	Good Thunder	Blue Earth	-98.9 dBm	-101.3 dBm	-99.4 dBm	-101.3 dBm
56055	Lake Crystal	Blue Earth	-90.0 dBm	-91.5 dBm	-93.1 dBm	-103.7 dBm
56063	Madison Lake	Blue Earth	-82.1 dBm	-84.4 dBm	-85.7 dBm	-95.7 dBm
56065	Mapleton	Blue Earth	-91.5 dBm	-96.1 dBm	-95.1 dBm	-88.8 dBm
56078	Pemberton	Blue Earth	-87.5 dBm	-92.5 dBm	-91.5 dBm	-86.8 dBm
56080	St.. Clair	Blue Earth	-92.7 dBm	-98.4 dBm	-97.2 dBm	-96.7 dBm
56090	Vernon Center	Blue Earth	-97.2 dBm	-99.1 dBm	-98.0 dBm	> dBm

Viewability of the Distant Stations
For Subject Communities in Watonwan County

Mankato DMA Watonwan County			Minneapolis-St. Paul DMA			Austin DMA
Zip code	**Community**	**County**	**WCCO**	**WFTC**	**KMSP**	**KAAL**
56022	Darfur	Watonwan	> dBm	> dBm		> dBm
56056	LaSalle	Watonwan	-105.3 dBm	-105.3 dBm		> dBm
56060	Lewisville	Watonwan	-105.0 dBm	-105.0 dBm		> dBm
56062	Madelia	Watonwan	-101.8 dBm	-103.2 dBm		> dBm
56081	St. James	Watonwan	-104.5 dBm	-104.4 dBm		> dBm

Viewability of the Distant Stations
For Subject Communities in Brown County

Mankato DMA Brown County			Minneapolis-St. Paul DMA			Austin DMA
Zip code	**Community**	**County**	**WCCO**	**WFTC**	**KMSP**	**KAAL**
56030	Essig	Brown	-102.7 dBm	-101.3 dBm	-99.6 dBm	> dBm
56084	Searles	Brown	-91.2 dBm	-95.4 dBm	-95.6 dBm	> dBm
56019	Comfrey	Brown	> dBm	> dBm	> dBm	> dBm
56041	Hanska	Brown	-100.3 dBm	-102.6 dBm	-104.2 dBm	> dBm
56085	Sleepy Eye	Brown	-104.3 dBm	-104.8 dBm	-105.4 dBm	> dBm
56087	Springfield	Brown	-108.3 dBm	-108.3 dBm	> dBm	> dBm
56073	New Ulm	Brown	-110.3 dBm	-110.7 dBm	-109.6 dBm	-111.0 dBm

Viewability of the Distant Stations
For Subject Community in Nicollet County

Mankato DMA Nicollet County			Minneapolis-St. Paul DMA			Austin DMA
Zip code	**Community**	**County**	**WCCO**	**WFTC**	**KMSP**	**KAAL**
56003	North Mankato	Nicollet	-80.6 dBm		-82.3 dBm	

Exhibit 3

CTV's 40-station Translator Network

(Display Channel, Physical Channel, Call Sign, Tower Location)

St. James, Minnesota

2	(26)	K26CS-D	ST. JAMES	MN
2	(29)	K29IE-D	ST. JAMES	MN
5	(44)	K44AD-D	ST. JAMES	MN
5	(30)	K30FN-D	ST. JAMES	MN
9	(14)	K14KE-D	ST. JAMES	MN
9	(34)	K34JX-D	ST. JAMES	MN
11	(21)	K21DG-D	ST. JAMES	MN
12	(41)	K41IZ-D	ST. JAMES	MN
16	(16)	K16CG-D	ST. JAMES	MN
20	(20)	K20LP-D	ST. JAMES	MN
23	(32)	K32GX-D	ST. JAMES	MN
23	(23)	K23MF-D	ST. JAMES	MN
24	(24)	K24JV-D	ST. JAMES	MN
31	(31)	K31KV-D	ST. JAMES	MN
35	(35)	K35KI-D	ST. JAMES	MN
40	(40)	K40BU-D	ST. JAMES	MN
41	(49)	K49HE-D	ST. JAMES	MN
45	(45)	K45LJ-D	ST. JAMES	MN

Jackson, Minnesota

2	(36)	K36IV-D	JACKSON	MN
4	(35)	K35IZ-D	JACKSON	MN
5	(40)	K40LA-D	JACKSON	MN
5	(45)	K45EH-D	JACKSON	MN
9	(23)	K23FO-D	JACKSON	MN
11	(19)	K19HZ-D	JACKSON	MN
12	(50)	K50KL-D	JACKSON	MN
16	(30)	K30KQ-D	JACKSON	MN
23	(43)	K43MJ-D	JACKSON	MN
29	(51)	K51KT-D	JACKSON	MN
46	(41)	K41EG-D	JACKSON	MN

Frost, Minnesota

2	(40)	K40JS-D	FROST	MN
4	(35)	K35IU-D	FROST	MN
5	(51)	K51KB-D	FROST	MN
5	(14)	K14KD-D	FROST	MN
9	(27)	K27FI-D	FROST	MN
11	(31)	K31EF-D	FROST	MN
12	(49)	K49JG-D	FROST	MN
16	(21)	K21KF-D	FROST	MN
23	(23)	K23FY-D	FROST	MN
29	(29)	K29IF-D	FROST	MN
46	(47)	K47MI-D	FROST	MN

Exhibit 4

Viewability Tables as Revised under Nielsen Statistics Indicating Distant Station Viewership that Is Not 'Significant'

Viewability of the Distant Stations
For Subject Communities in **Blue Earth County**

Mankato DMA			Minneapolis-St. Paul DMA			Austin DMA
Zip code	**Community**	**County**	**WCCO-TV** 45.062222 -93.139167	**WFTC** 45.058333 -93.124167	**KMSP-TV** 45.058333 -93.124167	**KAAL** 43.642778 -92.526389
56001	Mankato 44.164503 -93.993798	Blue Earth	-95 dBm 74.9 miles	-97 dBm 75.2 miles	-96 dBm 75.2 miles	> dBm 81.6 miles
56010	Amboy 43.887268 -94.157516	Blue Earth	> dBm 95.4 miles	> dBm 95.6 miles	> dBm 95.6 miles	> dBm 83.3 miles
56034	Garden City 44.04704 -94.16714	Blue Earth	-97 dBm 86.5 miles	-98 dBm 86.7 miles	> dBm 86.7 miles	> dBm 86.6 miles
56024	Eagle Lake 44.161128 -93.882517	Blue Earth	-86 dBm 72.2 miles	-88 dBm 72.3 miles	-88 dBm 72.3 miles	-98 dBm 76.6 miles
56037	Good Thunder 44.004284 -94.069117	Blue Earth	-98 dBm 86.3 miles	-99 dBm 86.5 miles	-98 dBm 86.5 miles	> dBm 81.1 miles
56055	Lake Crystal 44.106311 -94.218075	Blue Earth	-94 dBm 84.8 miles	-99 dBm 85.0 miles	-96 dBm 85.0 miles	> dBm 90.3 miles
56063	Madison Lake 44.203869 -93.813214	Blue Earth	-79 dBm 67.9 miles	-81 dBm 68.1 miles	-84 dBm 68.1 miles	-99 dBm 75.0 miles
56065	Mapleton 43.927118 -93.955400	Blue Earth	-98 dBm 88.1 miles	-99 dBm 88.2 miles	-98 dBm 88.2 miles	-94 dBm 73.9 miles
56078	Pemberton 44.007872 -93.783038	Blue Earth	-92 dBm 79.4 miles	-94 dBm 79.5 miles	-95 dBm 79.5 miles	-89 dBm 67.6 miles
56080	St. Clair 44.081054 -93.857765	Blue Earth	-93 dBm 76.5 miles	-94 dBm 76.6 miles	-93 dBm 76.6 miles	-90 dBm 73.1 miles
56090	Vernon Center 43.962287 -94.168266	Blue Earth	-98 dBm 91.4 miles	> dBm 91.6 miles	> dBm 91.6 miles	> dBm 85.0 miles

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Exhibit 4 (cont'd)

Viewability of the Distant Stations
For Subject Communities in **Watonwan County**

Mankato DMA			Minneapolis-St. Paul DMA			Austin DMA
Zip code	**Community**	**County**	**WCCO-TV** 45.062222 -93.139167	**WFTC** 45.058333 -93.124167	**KMSP-TV** 45.058333 -93.124167	**KAAL** 43.642778 -92.526389
56022	Darfur 44.051779 -94.837374	Watonwan	> dBm 109.1 miles	> dBm 109.5 miles		> dBm 118.9 miles
56056	LaSalle 44.07076 -94.56955	Watonwan	> dBm 98.3 miles	> dBm 98.7 miles		> dBm 106.3 miles
56060	Lewisville 43.922910 -94.436705	Watonwan	> dBm 101.5 miles	> dBm 101.7 miles		> dBm 97.5 miles
56062	Madelia 44.050219 -94.415835	Watonwan	> dBm 94.1 miles	> dBm 94.4 miles		> dBm 98.5 miles
56081	St. James 43.982285 -94.628111	Watonwan	> dBm 104.7 miles	> dBm 105.1 miles		> dBm 107.6 miles

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Exhibit 4 (cont'd)

Viewability of the Distant Stations
For Subject Communities in **Brown County**

Mankato DMA			Minneapolis-St. Paul DMA			Austin DMA
Zip code	**Community**	**County**	**WCCO-TV** 45.062222 -93.139167	**WFTC** 45.058333 -93.124167	**KMSP-TV** 45.058333 -93.124167	**KAAL** 43.642778 -92.526389
56030	Essig 44.32431 -94.60465	Brown	> dBm 88.3 miles	> dBm 88.8 miles	> dBm 88.8 miles	> dBm 113.8 miles
56084	Searles 44.22864 -94.43251	Brown	-93 dBm 85.9 miles	-97 dBm 86.3 miles	-95 dBm 86.3 miles	> dBm 103.3 miles
56019	Comfrey 44.109328 -94.904116	Brown	> dBm 109.1 miles	> dBm 109.6 miles	> dBm 109.6 miles	> dBm 123.0 miles
56041	Hanska 44.149918 -94.494801	Brown	> dBm 91.8 miles	> dBm 92.2 miles	> dBm 92.2 miles	> dBm 104.3 miles
56085	Sleepy Eye 44.295656 -94.723704	Brown	> dBm 94.3 miles	> dBm 94.8 miles	> dBm 94.8 miles	> dBm 118.5 miles
56087	Springfield 44.239409 -94.978598	Brown	> dBm 106.9 miles	> dBm 107.5 miles	> dBm 107.5 miles	> dBm 129.1 miles
56073	New Ulm 44.311944 -94.463055	Brown	> dBm 83.3 miles	> dBm 83.7 miles	> dBm 83.7 miles	> dBm 107.0 miles

Viewability of the Distant Stations
For North Mankato in **Nicollet County**

Mankato DMA			Minneapolis-St. Paul DMA			Austin DMA
Zip code	**Community**	**County**	**WCCO-TV** 45.062222 -93.139167	**WFTC** 45.058333 -93.124167	**KMSP-TV** 45.058333 -93.124167	**KAAL** 43.642778 -92.526389
56003	North Mankato 44.176514 -94.028382	Nicollet	-83 dBm 75.2 miles		-84 dBm 75.5 miles	

Exhibit 5

Uniqueness of KEYC-TV's Position

Defining Conditions of KEYC-TV's Circumstances	Potential Other Instances
Local Station's DMA includes County A and Distant Station is considered significantly viewed in County A	51
and Local Station and Distant Station are network affiliates of the same network	17
and Local Station and Distant Station are not under common ownership; and Local Station is not a satellite or a sister station of Distant Station	15
and Local Station is a full-power facility	9
and signal of Distant Station reaches less than 3 percent of the County[108]	3 (including the present case)

[108] This condition is a representation of the fact in the instant case that the Nielsen data resulted from translator viewing, rather than viewing the Distant Station itself. In the vast majority of cases identified in *Appendix C*, the Distant Station's signal reaches all or most of the county population. In several cases the signal reached 3 percent or less of the population, suggesting that the station's significantly viewed status likely resulted from translator viewership. The extent of stations' over-the-air signals in counties outside their DMAs is analyzed by the Commission in Appendix A, List 5 of the *2016 Report to Congress*. That data was used in this step.

Exhibit 6

Nielsen Studies for KAAL

nielsen

Significant Viewing Study
Mankato
Feb13, Nov13, Feb14, May14
Su-Sa 7A-1A
KAAL

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56001	Number of Intabs	11	11	10	13	22	23	45
	Average Weekly Cume	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cume Std. Error	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share Std. Error	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56002	Number of Intabs	0	0	0	0	0	0	0
	Average Weekly Cume	-	-	-	-	-	-	-
	Cume Std. Error	-	-	-	-	-	-	-
	Share	-	-	-	-	-	-	-
	Share Std. Error	-	-	-	-	-	-	-

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56006	Number of Intabs	0	0	0	0	0	0	0
	Average Weekly Cume	-	-	-	-	-	-	-
	Cume Std. Error	-	-	-	-	-	-	-
	Share	-	-	-	-	-	-	-
	Share Std. Error	-	-	-	-	-	-	-

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56010	Number of Intabs	1	1	0	2	2	2	4
	Average Weekly Cume	0.00	0.00	-	0.00	0.00	0.00	0.00
	Cume Std. Error	0.00	0.00	-	0.00	0.00	0.00	0.00
	Share	0.00	0.00	-	0.00	0.00	0.00	0.00
	Share Std. Error	-	-	-	0.00	0.00	0.00	0.00

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56034	Number of Intabs	0	0	0	1	0	1	1
	Average Weekly Cume	-	-	-	0.00	-	0.00	0.00
	Cume Std. Error	-	-	-	0.00	-	0.00	0.00
	Share	-	-	-	0.00	-	0.00	0.00
	Share Std. Error	-	-	-	-	-	-	-

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Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56024	Number of Intabs	1	0	3	0	1	3	4
	Average Weekly Cume	0.00	-	0.00	-	0.00	0.00	0.00
	Cume Std. Error	0.00	-	0.00	-	0.00	0.00	0.00
	Share	0.00	-	0.00	-	0.00	0.00	0.00
	Share Std. Error	-	-	0.00	-	-	0.00	0.00

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56037	Number of Intabs	1	2	1	6	3	7	10
	Average Weekly Cume	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cume Std. Error	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share Std. Error	-	0.00	-	0.00	0.00	0.00	0.00

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56055	Number of Intabs	6	0	2	1	6	3	9
	Average Weekly Cume	25.00	-	0.00	0.00	25.00	0.00	7.60
	Cume Std. Error	0.00	-	0.00	0.00	0.00	0.00	10.58
	Share	0.57	-	0.00	0.00	0.57	0.00	0.47
	Share Std. Error	0.69	-	0.00	-	0.69	0.00	0.54

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56063	Number of Intabs	1	4	2	0	5	2	7
	Average Weekly Cume	0.00	0.00	0.00	-	0.00	0.00	0.00
	Cume Std. Error	0.00	0.00	0.00	-	0.00	0.00	0.00
	Share	0.00	0.00	0.00	-	0.00	0.00	0.00
	Share Std. Error	-	0.00	0.00	-	0.00	0.00	0.00

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56065	Number of Intabs	0	3	0	1	3	1	4
	Average Weekly Cume	-	0.00	-	0.00	0.00	0.00	0.00
	Cume Std. Error	-	0.00	-	0.00	0.00	0.00	0.00
	Share	-	0.00	-	0.00	0.00	0.00	0.00
	Share Std. Error	-	0.00	-	-	0.00	-	0.00

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56078	Number of Intabs	0	0	0	0	0	0	0
	Average Weekly Cume	-	-	-	-	-	-	-
	Cume Std. Error	-	-	-	-	-	-	-
	Share	-	-	-	-	-	-	-
	Share Std. Error	-	-	-	-	-	-	-

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Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56080	Number of Intabs	0	0	0	0	0	0	0
	Average Weekly Cume	-	-	-	-	-	-	-
	Cume Std. Error	-	-	-	-	-	-	-
	Share	-	-	-	-	-	-	-
	Share Std. Error	-	-	-	-	-	-	-

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56090	Number of Intabs	0	0	1	0	0	1	1
	Average Weekly Cume	-	-	0.00	-	-	0.00	0.00
	Cume Std. Error	-	-	0.00	-	-	0.00	0.00
	Share	-	-	0.00	-	-	0.00	0.00
	Share Std. Error	-	-	-	-	-	-	0.00

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56022	Number of Intabs	0	0	0	0	0	0	0
	Average Weekly Cume	-	-	-	-	-	-	-
	Cume Std. Error	-	-	-	-	-	-	-
	Share	-	-	-	-	-	-	-
	Share Std. Error	-	-	-	-	-	-	-

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56056	Number of Intabs	0	0	0	0	0	0	0
	Average Weekly Cume	-	-	-	-	-	-	-
	Cume Std. Error	-	-	-	-	-	-	-
	Share	-	-	-	-	-	-	-
	Share Std. Error	-	-	-	-	-	-	-

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56060	Number of Intabs	0	1	2	0	1	2	3
	Average Weekly Cume	-	0.00	0.00	-	0.00	0.00	0.00
	Cume Std. Error	-	0.00	0.00	-	0.00	0.00	0.00
	Share	-	0.00	0.00	-	0.00	0.00	0.00
	Share Std. Error	-	-	0.00	-	-	0.00	0.00

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56062	Number of Intabs	2	2	3	3	4	6	10
	Average Weekly Cume	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cume Std. Error	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share Std. Error	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56081	Number of Intabs	5	3	4	7	8	11	19
	Average Weekly Cume	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cume Std. Error	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share Std. Error	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56030	Number of Intabs	1	0	0	0	1	0	1
	Average Weekly Cume	0.00	-	-	-	0.00	-	0.00
	Cume Std. Error	0.00	-	-	-	0.00	-	0.00
	Share	0.00	-	-	-	0.00	-	0.00
	Share Std. Error	-	-	-	-	-	-	-

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56084	Number of Intabs	0	0	0	0	0	0	0
	Average Weekly Cume	-	-	-	-	-	-	-
	Cume Std. Error	-	-	-	-	-	-	-
	Share	-	-	-	-	-	-	-
	Share Std. Error	-	-	-	-	-	-	-

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56019	Number of Intabs	0	0	0	0	0	0	0
	Average Weekly Cume	-	-	-	-	-	-	-
	Cume Std. Error	-	-	-	-	-	-	-
	Share	-	-	-	-	-	-	-
	Share Std. Error	-	-	-	-	-	-	-

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56041	Number of Intabs	3	1	2	0	4	2	6
	Average Weekly Cume	0.00	0.00	0.00	-	0.00	0.00	0.00
	Cume Std. Error	0.00	0.00	0.00	-	0.00	0.00	0.00
	Share	0.00	0.00	0.00	-	0.00	0.00	0.00
	Share Std. Error	0.00	-	0.00	-	0.00	0.00	0.00

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56085	Number of Intabs	4	1	2	3	5	5	10
	Average Weekly Cume	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cume Std. Error	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share Std. Error	0.00	-	0.00	0.00	0.00	0.00	0.00

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Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56087	Number of Intabs	2	1	2	2	3	4	7
	Average Weekly Cume	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cume Std. Error	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share Std. Error	0.00	-	0.00	0.00	0.00	0.00	0.00

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56003	Number of Intabs	3	7	2	2	10	4	14
	Average Weekly Cume	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cume Std. Error	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share Std. Error	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56082	Number of Intabs	0	0	0	0	0	0	0
	Average Weekly Cume	-	-	-	-	-	-	-
	Cume Std. Error	-	-	-	-	-	-	-
	Share	-	-	-	-	-	-	-
	Share Std. Error	-	-	-	-	-	-	-

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56074	Number of Intabs	0	0	0	0	0	0	0
	Average Weekly Cume	-	-	-	-	-	-	-
	Cume Std. Error	-	-	-	-	-	-	-
	Share	-	-	-	-	-	-	-
	Share Std. Error	-	-	-	-	-	-	-

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56021	Number of Intabs	0	0	0	0	0	0	0
	Average Weekly Cume	-	-	-	-	-	-	-
	Cume Std. Error	-	-	-	-	-	-	-
	Share	-	-	-	-	-	-	-
	Share Std. Error	-	-	-	-	-	-	-

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56054	Number of Intabs	1	1	0	0	1	0	1
	Average Weekly Cume	0.00	0.00	-	-	0.00	-	0.00
	Cume Std. Error	0.00	0.00	-	-	0.00	-	0.00
	Share	0.00	0.00	-	-	0.00	-	0.00
	Share Std. Error	-	-	-	-	-	-	-

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56073	Number of Intabs	2	1	2	2	3	4	7
	Average Weekly Cume	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cume Std. Error	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share Std. Error	0.00	-	0.00	0.00	0.00	0.00	0.00

Geography Grouping	Results	Feb13	Nov13	Feb14	May14	Combined (Feb13 & Nov13)	Combined (Feb14 & May14)	Combined (All 4 Sweeps)
56001, 56002, 56003, 56006	Number of Intabs	14	18	12	15	32	27	59
	Average Weekly Cume	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cume Std. Error	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Share Std. Error	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CERTIFICATE OF SERVICE

I, Stuart Dong, legal assistant with the firm of Wood, Martin & Hardy, PC, hereby certify that on August 11, 2017, a copy of the foregoing *Supplement to Petition for Special Relief* was deposited in the U.S. mail, postage prepaid, addressed to the following:

CC VIII Operating LLC
12405 Powerscourt Drive
St. Louis, MO 63131

Consolidated Communications
221 East Hickory Street
Mankato, Minnesota 56001

Fort Randall Cable Systems, Inc.
1700 Technology Drive NE
Suite 100
Willmar, Minnesota 56201

KAAL Television
1701 10th Place NE
Austin, Minnesota 55912

KIMT Television
112 N Pennsylvania Avenue
Mason City, Iowa 50401

Mediacom Minnesota LLC
One Mediacom Way
Mediacom Park, New York 10918

Midcontinent Communications
3901 North Lousie Avenue
Sioux Fall, South Dakota 57107

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Washinton, D.C. 20001

Comcast
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Philadelphia, PA 19103

Cable Franchise Authority
City of Mankato
10 Civic Center Plaza
Mankato, MN 56001

Cable Franchise Authority
City of North Mankato
1001 Belgrade Avenue
North Mankato, MN 56002

Cable Franchise Authority
Amboy City Hall
244 East Maine Street
P.O. Box 250
Amboy, MN 56010

Cable Franchise Authority
Good Thunder City Hall
130 South Ewing Street
P.O. Box 97
Good Thunder, MN 56037

Cable Franchise Authority
Madelia City Hall
116 West Main Street
Madelia, MN 56062

Cable Franchise Authority
City of Hanska
P.O. Box 91
Hanska, MN 56041

Cable Franchise Authority
Lake Crystal City Hall
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Lake Crystal, MN 56055

Cable Franchise Authority
City of Madison Lake
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Cable Franchise Authority
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124 Armstrong Blvd. South
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St. James, MN 56081

Cable Franchise Authority
City of Sleepy Eye
200 Main Street East
Sleepy Eye, MN 56085

Cable Franchise Authority
City of Springfield
2 East Central
Springfield, MN 56087

Cable Franchise Authority
City of New Ulm
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s/ Stuart Dong
Stuart Dong

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